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AIRPOWER
MODERNIZATION

Brig Gen Robert A. Rosenberg

JANUARY 1982

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AIRPOWER MODERNIZATION

Brig Gen Robert A. Rosenberg

THIS PRESENTATION COVERS FOUR INTER-RELATED SUBJECTS: FIRST, THE GROWTH OF SOVIET POWER; SECOND, HOW THE SOVIET THREAT DRIVES THE QUALITY AND QUANTITY OF FORCES WE NEED; THIRD, THE RATIONALE FOR THE PRESIDENT'S DECISION ON THE B-1 AND ADVANCED TECHNOLOGY BOMBER; AND FINALLY, SOME MATERIAL TO PUT DEFENSE SPENDING IN PERSPECTIVE BY RELATING IT TO OTHER U.S. EXPENDITURES.

I WILL ALSO DISCUSS HOW IMPROPER OR INCOMPLETE ANALYSIS CAN CONTRIBUTE TO MISCONCEPTIONS AND MISUNDERSTANDINGS ABOUT NATIONAL SECURITY REQUIREMENTS.

WE IN THE AIR FORCE SHARE A VITAL RESPONSIBILITY WITH OSD, THE ADMINISTRATION, AND THE CONGRESS TO MAINTAIN THE TRUST OF THE PUBLIC THAT WE ARE NOT SPENDING OUR NATIONAL RESOURCES UNWISELY ON THE MILITARY SYSTEMS WE PURSUE. THAT MEANS WE HAVE A RESPONSIBILITY TO OBJECTIVELY ASSESS ALTERNATE COURSES OF ACTION--WHICH IS MY GOAL AS THE AIR FORCE'S CHIEF ANALYST.

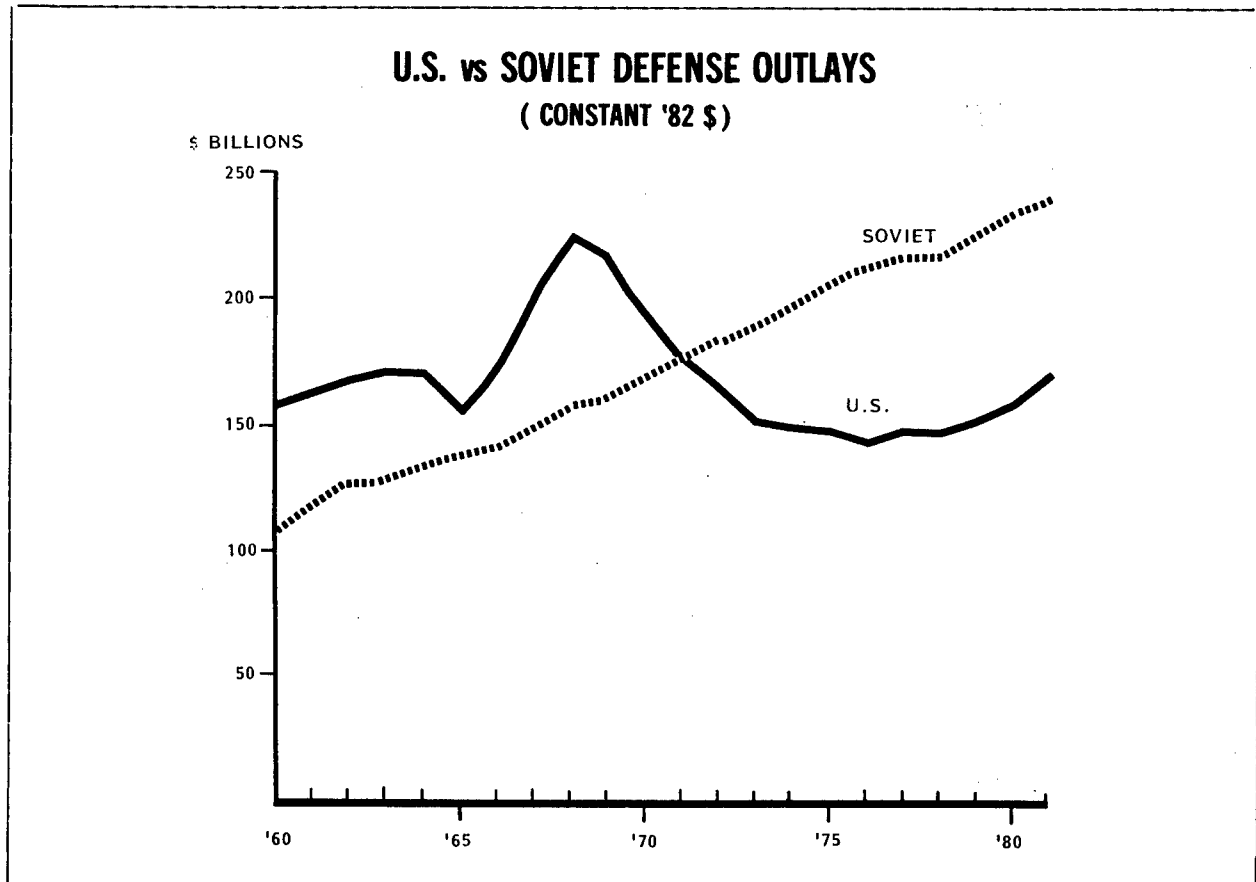
I LIKE TO THINK OF MY JOB AS THE PROCESS OF "SHEDDING LIGHT"--PRESENTING ALL THE FACTS, FROM A NEUTRAL, BALANCED VIEWPOINT, IN SUFFICIENT DEPTH AND DETAIL FOR THE ISSUE OR DECISION AT HAND.

TODAY, THE U.S. FACES THE PROBLEM OF REACTING TO AN UNPRECEDENTED AND RELENTLESS GROWTH OF SOVIET POWER--AND SOVIET/SURROGATE ADVENTURISM. WE HAVE EMBARKED ON A COMPREHENSIVE PROGRAM TO STRENGTHEN OUR DETERRENT POSTURE, AND REVERSE THE DECLINE IN U.S. STRATEGIC CAPABILITIES RELATIVE TO THE SOVIET UNION.

THIS PROGRAM WAS NOT DEVELOPED WITHOUT SERIOUS THOUGHT. REGARDLESS OF WHAT YOU MIGHT HEAR ABOUT RISING DEFENSE BUDGETS, THE DEPARTMENT OF DEFENSE IS AGGRESSIVELY PURSUING ACTIONS TO KEEP COSTS DOWN. BUT, THE BOTTOM LINE IS THAT WE ARE IN A VERY REAL COMPETITION WITH THE SOVIET UNION, AND WE CANNOT AFFORD TO LET OURSELVES SLIDE INTO A POSITION OF INFERIORITY. WE CANNOT AFFORD TO CUT PROGRAMS THAT ARE NEEDED TO RESPOND TO THE SOVIET THREAT.

The Threat is Real....and Growing

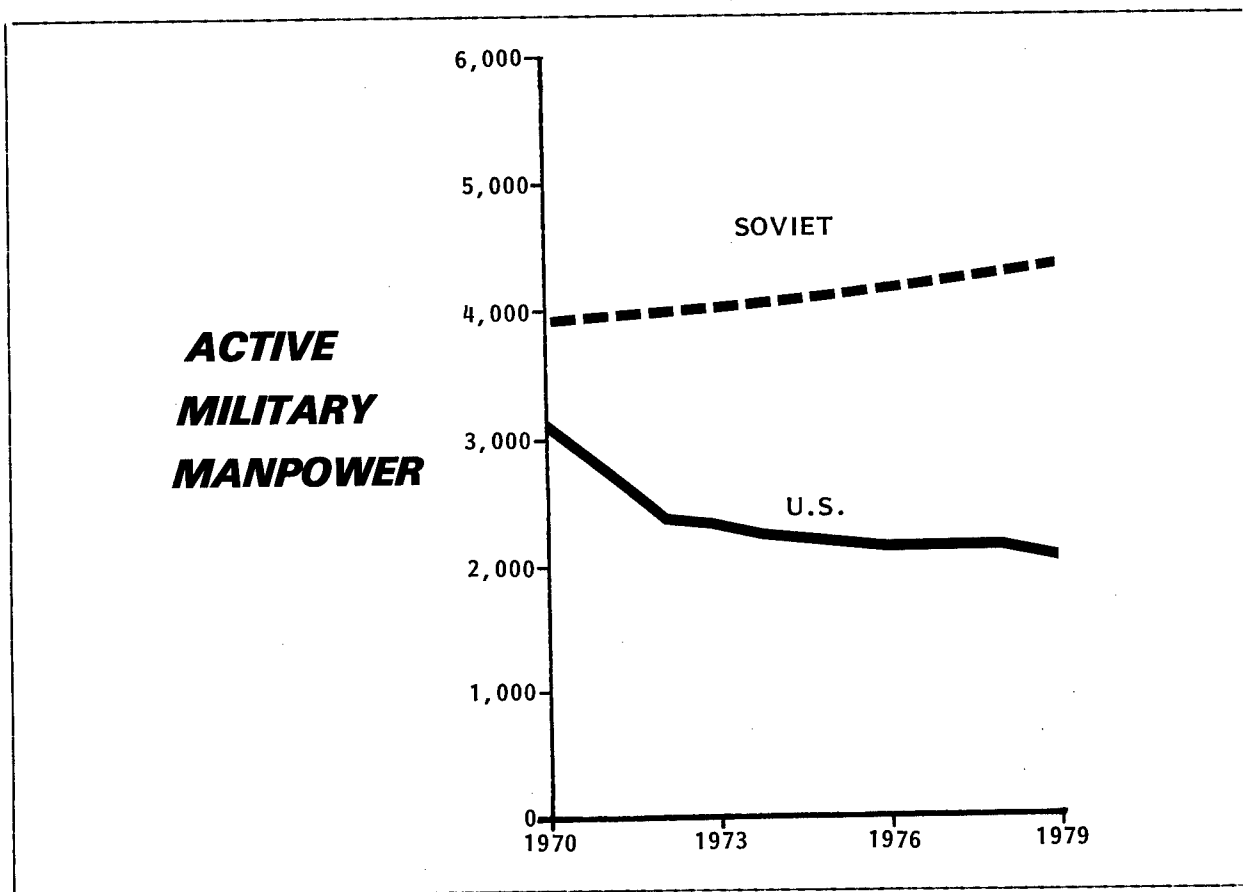
THE SOVIET THREAT IS REAL! WHILE THERE IS ROOM FOR DISCUSSION ON WHY THE SOVIETS ARE WILLING TO DEVOTE A LARGE PORTION OF THEIR RESOURCES TO THE MILITARY, THERE IS NO DOUBT THAT THEY HAVE ASSEMBLED A TRULY POWERFUL MILITARY MACHINE. LET ME GIVE YOU SOME EXAMPLES.



MY FIRST FIGURE COMPARES TOTAL U.S. AND SOVIET MILITARY EXPENDITURES FROM 1965 TO 1980. THESE COSTS ARE IN CONSTANT DOLLARS, WHICH MEANS THEY HAVE BEEN ADJUSTED TO ELIMINATE THE EFFECTS OF INFLATION. AS YOU CAN SEE, SOVIET EXPENDITURES HAVE BEEN RISING AT A STEADY RATE WHILE THE U.S. HAS BEEN CUTTING BACK SINCE THE VIETNAM WAR.

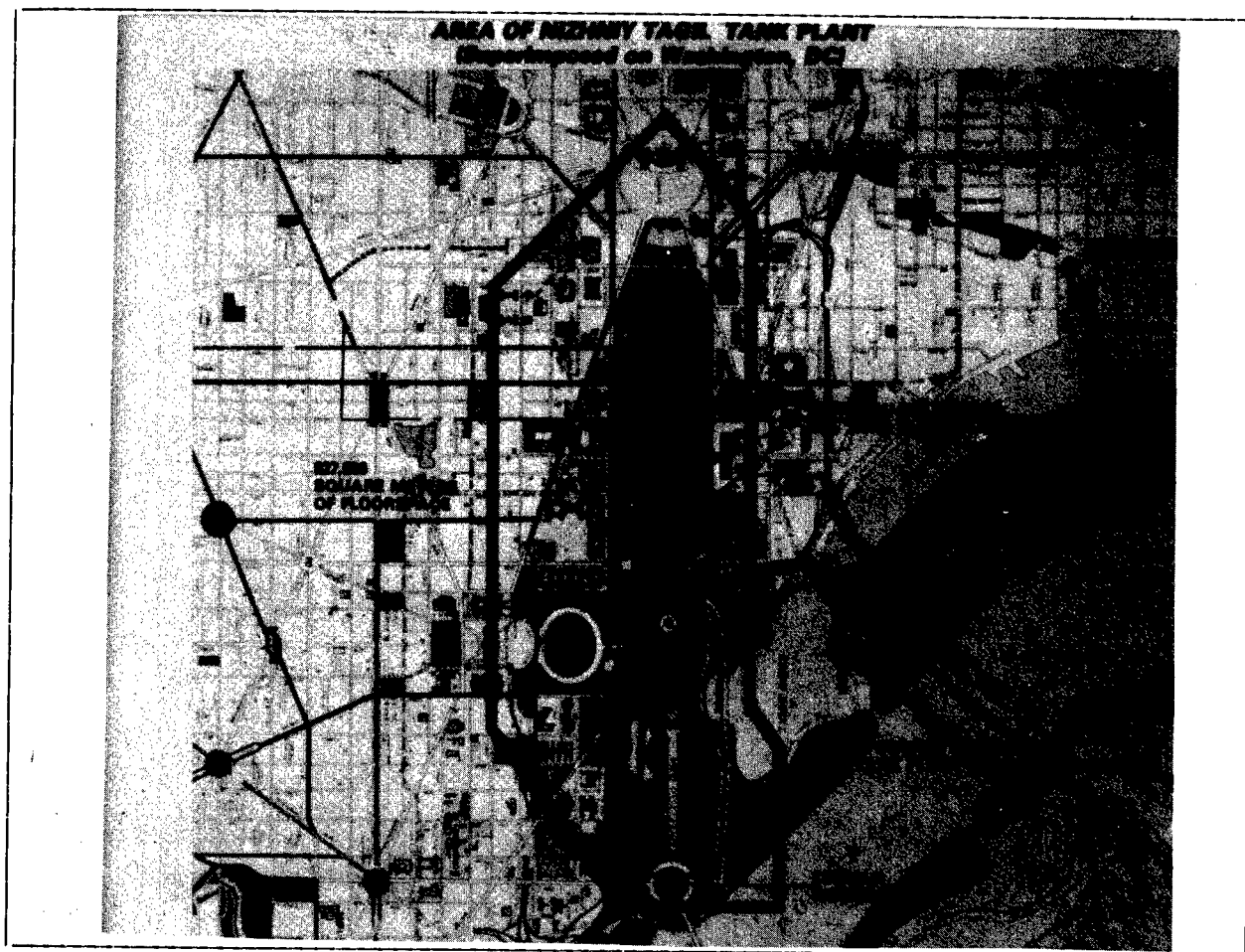
SOVIET REAL GROWTH HAS PROCEEDED AT A STEADY FOUR TO FIVE PERCENT EACH YEAR. SINCE 1971, THEY HAVE OUTSPENT US BY OVER 570 BILLION DOLLARS, AND THE GAP IN INVESTMENT ALONE IS APPROACHING \$350 BILLION. EVEN WITH PASSAGE OF THE LARGE DOD INCREASE NOW BEING DISCUSSED, THEY WILL CONTINUE TO OUTSPEND US FOR THE FORESEEABLE FUTURE.

WE CURRENTLY SPEND ABOUT 5% OF OUR GROSS NATIONAL PRODUCT (GNP) ON DEFENSE WHERE THEY SPEND ABOUT 13%. THE LAST TIME WE SPENT 13% WAS DURING THE KOREAN WAR, AND THE HIGHEST WE REACHED DURING THE VIETNAM WAR WAS 9%.



THE MANPOWER STORY IS NO BETTER. THIS CHART SHOWS ACTIVE DUTY MILITARY PERSONNEL. SINCE 1970, WE DROPPED 34% WHILE THE SOVIETS INCREASED ABOUT 10 PERCENT.

WE NOW HAVE JUST OVER 2 MILLION PEOPLE IN UNIFORM, BUT THEY OUTNUMBER US BY MORE THAN TWO TO ONE, WITH ALMOST 4-1/2 MILLION IN UNIFORM. IF WE COUNTED RESERVE FORCES, THE SITUATION WOULD BE EVEN WORSE BECAUSE THEY HAVE 8-1/2 MILLION PEOPLE IN THE RESERVES--MORE THAN 10 TIMES THE U.S. NUMBER OF 800,000.



THE RESOURCES THE SOVIETS HAVE DEVOTED TO THE MILITARY HAVE RESULTED IN AN IMPRESSIVE PRODUCTION CAPABILITY.

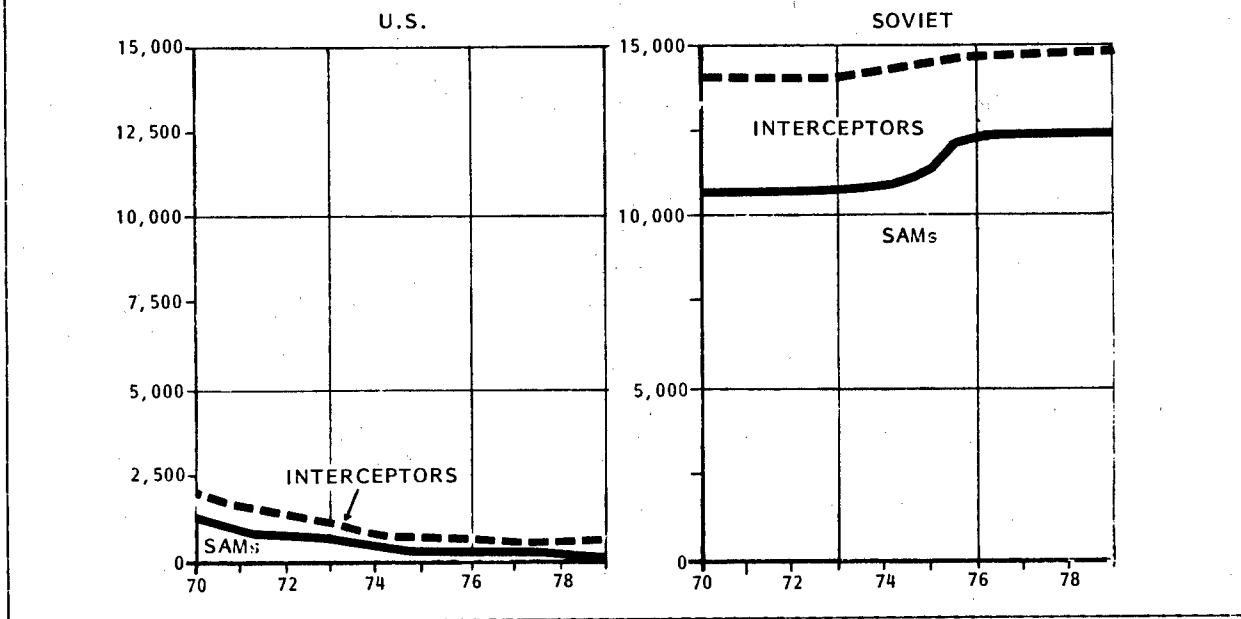
YOU MAY HAVE SEEN THIS PICTURE OF THE SOVIET'S NIZHNIY TAGIL TANK PLANT SUPERIMPOSED ON WASHINGTON, DC. THAT PLANT ALONE HAS MORE THAN 200 ACRES OF PRODUCTION LINES UNDER ROOF. BY WAY OF COMPARISON, THE LARGEST U.S. TANK PLANT (IN WARREN, MICHIGAN) HAS FEWER THAN 28 ACRES UNDER ROOF. THE SOVIETS PRODUCED 2,500 TANKS IN 1980 ALONE AND NOW OUTNUMBER US BY OVER FOUR TO ONE (46,000 to 11,000).

THE SOVIETS ALSO HAVE 7,300 FIGHTER AIRCRAFT VERSUS OUR 3,800. THEY PRODUCE FIRSTLINE FIGHTERS AT A RATE OF ABOUT ONE EVERY SEVEN HOURS--MORE THAN THREE TIMES AS FAST AS WE DO. EVERY THREE YEARS THEY PRODUCE AS MANY FIGHTER PLANES AS WE NOW HAVE IN OUR TOTAL INVENTORY.

IT HAS ALSO BEEN PROPOSED THAT WE SOLVE THE PROBLEM OF LACK-OF-QUANTITY BY BUYING LOTS OF LOW COST, SIMPLE AIRCRAFT TO MAKE UP THE DEFICIENCY. UNFORTUNATELY, THE SOVIET'S ACQUISITION STRATEGY MAKES THIS APPROACH INEFFECTIVE. THEY RECOGNIZE THE VALUE OF A QUALITY, DAY/NIGHT, ALL-WEATHER AIR FORCE; AND THAT IS WHAT THEY ARE PRODUCING--NOT SIMPLE, CHEAP AIRCRAFT.

I WILL GET BACK TO THE IMPLICATIONS OF THIS LATER.

AIR DEFENSE FORCES



ONE MORE COMPARISON--U.S. vs SOVIET AIR DEFENSE FORCES. WE NOW HAVE LESS THAN 350 INTERCEPTORS AND HAVE GOTTEN RID OF ALL OUR U.S.-BASED SURFACE-TO-AIR MISSILES (SAMS). BUT, IN EVENT OF A WAR, OUR PENETRATING FORCES WILL HAVE TO FACE 2500 INTERCEPTORS AND OVER 12,000 STRATEGIC SAMS ON LAUNCHERS. IS IT ANY WONDER THAT OUR BOMBER CREWS WOULD LIKE A NEWER PLANE THAN ONE THAT WAS BUILT BEFORE MANY OF THEM WERE BORN?

THE CURRENT ADMINISTRATION HAS RECOGNIZED THE NEED TO BOLSTER OUR STRATEGIC DEFENSES AND IS INITIATING IMPROVEMENTS. WE PLAN TO IMPROVE THE DEW LINE AND DEPLOY OVER-THE-HORIZON RADARS, F-15 INTERCEPTORS, AND AWACS AIRCRAFT. THE ADMINISTRATION IS ALSO RE-EMPHASIZING RESEARCH ON BALLISTIC MISSILE DEFENSE AND PLANS TO EXPAND OUR CIVIL DEFENSE PROGRAM.

THE STRATEGIC DEFENSE IMPROVEMENTS WILL CLOSE GAPS IN OUR ABILITY TO PROVIDE DETECTION AND WARNING AND IMPROVE OUR CAPABILITY TO VECTOR OUR FIGHTERS TO INTERCEPT POINTS. FOR THE FIRST TIME IN MANY YEARS, I CAN FORESEE THE DAY WHEN THE U.S. WON'T BE OPEN TO A BOMBER ATTACK.

HISTORICALLY, WE HAVE BALANCED SOVIET SUPERIORITY IN NUMBERS WITH OUR TECHNOLOGICAL SUPERIORITY. BUT, WE CAN'T RELY ON THAT IN THE FUTURE BECAUSE THE SOVIETS ARE ALREADY AHEAD IN SOME AREAS AND ARE CLOSING THE GAP IN MOST OTHER AREAS. THE CIA ESTIMATES THAT THE SOVIETS SPENT TWICE AS MUCH IN THE LATE SEVENTIES ON MILITARY RESEARCH AND DEVELOPMENT AS THE U.S., AND THEY ARE CONTINUING AT THAT PACE.

THE AMOUNT OF EQUIPMENT ROLLING OFF SOVIET LINES GOES FAR BEYOND THEIR REASONABLE NEEDS; AND IT IS NOT ALL SIMPLE, LOW-TECHNOLOGY EQUIPMENT AS SOME WOULD HAVE YOU BELIEVE. THE SOVIETS INCORPORATE THEIR TECHNOLOGY IN THEIR NEW EQUIPMENT: SO, IF WE'RE NOT CAREFUL, WE'RE HEADED FOR SOVIET SUPERIORITY IN TECHNOLOGY AS WELL AS IN NUMBERS.

THE THREAT IS REAL, AND WE MUST NOT ALLOW OURSELVES TO BE TAKEN IN OR CONFUSED BY THE DUPLICITY OF THE SOVIETS OR THEIR APOLOGISTS. I'LL GIVE YOU AN EXAMPLE OF WHAT I MEAN.

THE SOVIETS ARE RUNNING A PROPAGANDA CAMPAIGN AGAINST THE PLANNED DEPLOYMENT OF PERSHING II MISSILES AND GROUND LAUNCHED CRUISE MISSILES (GLCMS) IN EUROPE. BOTH CAN CARRY NUCLEAR WEAPONS AS A COUNTERBALANCE TO SOVIET NUCLEAR CAPABILITIES.

THE SOVIETS ARE TRYING TO PREVENT DEPLOYMENT BY ACCUSING US OF FUELING A NUCLEAR ARMS RACE IN EUROPE AND BY RAISING FEARS THAT WE WILL TURN EUROPE INTO A NUCLEAR BATTLEGROUND.



LAUNCH OF
SOVIET SS-20
MOBILE MISSILE.

HOWEVER, AT THE SAME TIME, THEY HAVE BEEN DEPLOYING A MOBILE, INTERMEDIATE RANGE BALLISTIC MISSILE, THE SS-20, UNDER THE GUISE OF MODERNIZATION. EACH SS-20 CARRIES THREE ACCURATE WEAPONS THAT CAN BE AIMED AT SEPARATE TARGETS. IT HAS A 3,000 MILE RANGE, AND EACH SS-20 LAUNCHER ALSO HAS A RELOAD MISSILE WITH THREE MORE WEAPONS. AND AGAIN, THE LAUNCHERS ARE MOBILE, WHEREAS THE SYSTEMS THEY ARE REPLACING ARE AT FIXED, AND THEREFORE MORE VULNERABLE, SITES.

IN SUM, THE SOVIETS ARE IN THE MIDDLE OF A MASSIVE THEATER NUCLEAR DEPLOYMENT PROGRAM WHICH PROVIDES A SIX-FOLD INCREASE IN WEAPONS, IMPROVES THEIR KILL CAPABILITY, AND PREVENTS US FROM ATTACKING THEM DUE TO THEIR MOBILITY--WHILE ON THE WORLD SCENE, THEY ACCUSE US OF CAUSING AN ARMS BUILD-UP, EVEN THOUGH OUR PLANNED DEPLOYMENT IS IN RESPONSE TO THEIR ON-GOING SS-20 DEPLOYMENT, AND OUR RESPONSE WILL INCLUDE FAR FEWER AND SMALLER WEAPONS.

IN THIS COUNTRY, THERE ARE A WIDE VARIETY OF VIEWS ON MILITARY PROGRAMS, BUT MOST CONFLICTING POSITIONS ARE BASED ON HONEST DIFFERENCES OF OPINION. WE CAN'T VIEW INFORMATION FROM THE SOVIET UNION IN THE SAME LIGHT. SOVIET INFORMATION IS ORCHESTRATED AND DESIGNED TO PROMOTE THEIR OBJECTIVES WITH LITTLE REGARD FOR THE TRUTH. THEY HAVE A WIDE VARIETY OF PUBLICATIONS AND ORGANIZATIONS THROUGHOUT THE WORLD TO DISSEMINATE THEIR PROPAGANDA AND ARE OFTEN HELPED BY UNWITTING ACCOMPLICES WHO DON'T REALIZE THEY ARE BEING GIVEN FALSE OR INACCURATE INFORMATION FROM SOVIET SOURCES. I CAUTION YOU THAT IF YOU ARE NOT CAREFUL IN CHOOSING YOUR SOURCES OF INFORMATION, YOU CAN GET A VERY ROSY, BUT INACCURATE VIEW OF THE SOVIET MILITARY THREAT.

WE CAN'T FORGET THE REALITY OF THE SOVIET THREAT WHEN WE ASSESS THE NEED FOR U.S. MILITARY PROGRAMS. IT IS AN INTEGRAL PART OF ANY PROPER DEFENSE ANALYSIS. AT THE SAME TIME, THE AIR FORCE LEADERSHIP FULLY SUPPORTS THE GOALS OF THOSE WHOSE LEGITIMATE EFFORTS SEEK REFORM IN THE DEFENSE ESTABLISHMENT TO ENHANCE OUR NATIONAL SECURITY IN AN AFFORDABLE WAY. UNFORTUNATELY, THE PATH TO IMPROVED DEFENSE SPENDING IS UNCLEAR, AND IT CAN BE OBSCURED FURTHER WHEN THE AMERICAN PUBLIC AND NATIONAL DECISION MAKERS ARE NOT GIVEN COMPLETE AND UP-TO-DATE INFORMATION.

IN THE RECENT PAST, MUCH HAS BEEN WRITTEN BY THE MEDIA ABOUT WEAPON SYSTEMS THAT HAVE BECOME TOO COMPLEX, AND IT HAS BEEN SUGGESTED THAT WE CHANGE OUR PROCUREMENT POLICIES TO BUY SIMPLER, BUT MORE, EQUIPMENT. IN MANY RESPECTS, OVEREMPHASIS ON THIS VIEWPOINT CAN MISLEAD DECISION MAKERS BY CONCENTRATING ON THE PROBLEMS OF HIGH-TECHNOLOGY SYSTEMS WITHOUT FULLY RECOGNIZING THEIR ASSOCIATED BENEFITS.

THE FOCUS OF THIS ACTIVITY IS THE QUALITY VS. QUANTITY ARGUMENT THAT HAS BEEN EXHAUSTIVELY DEBATED, NOT ONLY WITHIN THE DEFENSE ESTABLISHMENT BUT IN THE PUBLIC MEDIA AS WELL. AN IMPRESSIVE COLLECTION OF DATA AND FIGURES CAN BE ACCUMULATED TO SUPPORT THE CASE FOR MORE, SIMPLER SYSTEMS, AND IT CAN BE WELL-PACKAGED TO PERSUADE AN AUDIENCE THAT THE CONCLUSIONS ARE IRREFUTABLE.

IF THAT IS THE ONLY SIDE OF THE ARGUMENT PEOPLE SEE, THEY COULD COME TO VIEW TECHNOLOGY WITH SUSPICION AND DISTRUST. THEY WOULD PROBABLY SUPPORT CHANGING DEFENSE PROGRAMS IN WAYS THAT WOULD TRADE TECHNOLOGICAL SUPERIORITY AND ITS ATTENDANT COMPLEXITY FOR INCREASED QUANTITY AND ITS ASSUMED SIMPLICITY AND ASSUMED LOW COST.

THE SAME PEOPLE MIGHT WELL REACH DIFFERENT CONCLUSIONS IF THEY SAW BOTH SIDES OF THE STORY--AS THEY SHOULD IF OBJECTIVE ANALYSES WERE PRESENTED. BUT WHEN THEY SEE ONLY HALF OF THE STORY, OR WORSE LEGERDEMAIN OR ABUSE AND MISUSE OF DATA, THEY CAN BECOME PREDISPOSED TO INTERPRET INFORMATION IN SUCH A WAY THAT IT REINFORCES A NEGATIVE VIEW OF COMPLEXITY.

FOR A PROPER PERSPECTIVE ON THE QUALITY-QUANTITY ISSUE, ONE MUST BE CAUTIOUS OF BEING EXPOSED TO ONLY A SMALL VIEW OF THE ISSUE. THIS TENDS TO ISOLATE THE ANALYSIS FROM REALITY AND ENCOURAGES FACTS TO BE USED OUT OF CONTEXT.

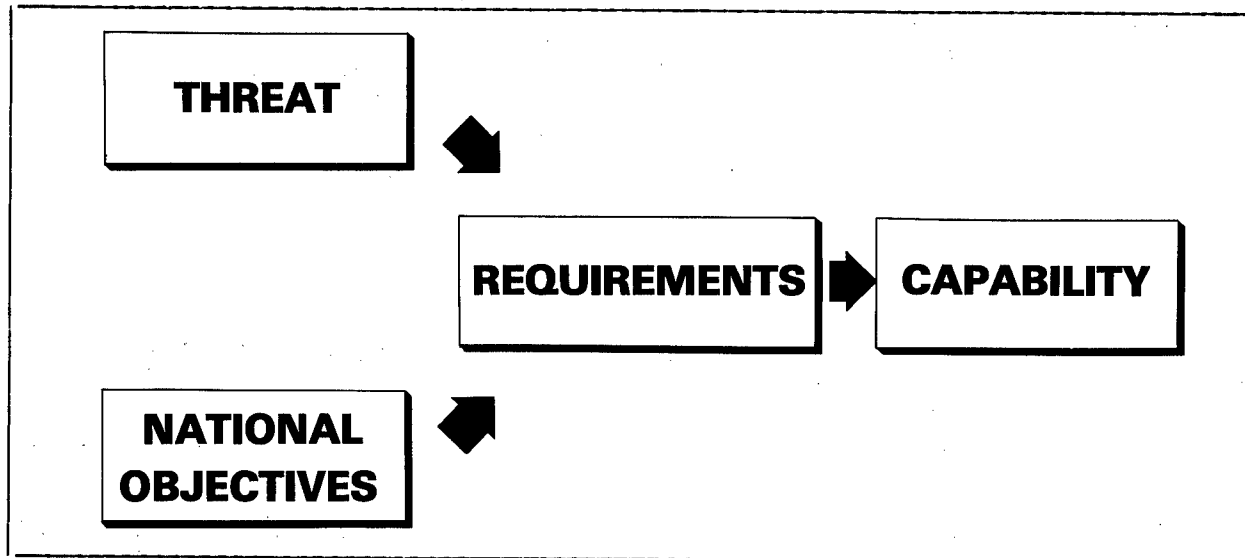
ONE SHOULD LOOK OUT FOR SELECTED USE OF FACTS--USUALLY HISTORICAL INFORMATION SUPPORTED WITH THE ADMONISHMENT "LEARN FROM THE PAST--OR YOU ARE DOOMED TO REPEAT IT." WITH SUFFICIENT DILIGENCE AND SELECTIVITY, EVERY ARGUMENT CAN BE SUPPORTED WITH HISTORICAL DATA.

FINALLY, SOME PRESENT US WITH A FALSE DILEMMA--A CHOICE BETWEEN QUALITY OR QUANTITY WITHOUT RECOGNIZING A PLACE FOR BOTH. THEN, THEY POINT OUT PROBLEMS

WITH COMPLEX SYSTEMS AND OFFER THEM AS PROOF THAT WE SHOULD MOVE TO SIMPLE SYSTEMS WITHOUT EVER TRYING TO SHOW HOW THEY WILL SATISFY REQUIREMENTS. IN THE REAL WORLD THERE ARE PLACES FOR BOTH QUALITY AND QUANTITY SYSTEMS, AND THE THREAT DICTATES WHERE EACH IS BEST. BUT, WITH THE FALSE DILEMMA, THESE CRITICS AVOID HAVING TO SHOW HOW THEIR APPROACH TO WEAPON SYSTEM PROCUREMENT WOULD SATISFY REQUIREMENTS DICTATED BY THE SOVIET THREAT.

The Threat Drives the Requirements

THIS NEXT CHART IS NOT AN ATTEMPT TO QUANTIFY OR ESPOUSE AIR FORCE DOCTRINE. IT SIMPLY IS A WAY OF ILLUSTRATING HOW IMPORTANT THE THREAT IS TO ANY DEFENSE ISSUE. NO FORECAST OF THE THREAT IS GUARANTEED ACCURATE, BUT IT CERTAINLY DOES PROVIDE INSIGHT INTO WHAT FORCES COULD THREATEN OUR FUTURE SURVIVAL. IT MUST BE ONE OF THE DOMINANT FACTORS THAT INFLUENCES THE FORMULATION AND EXECUTION NATIONAL AND DEFENSE STRATEGY.



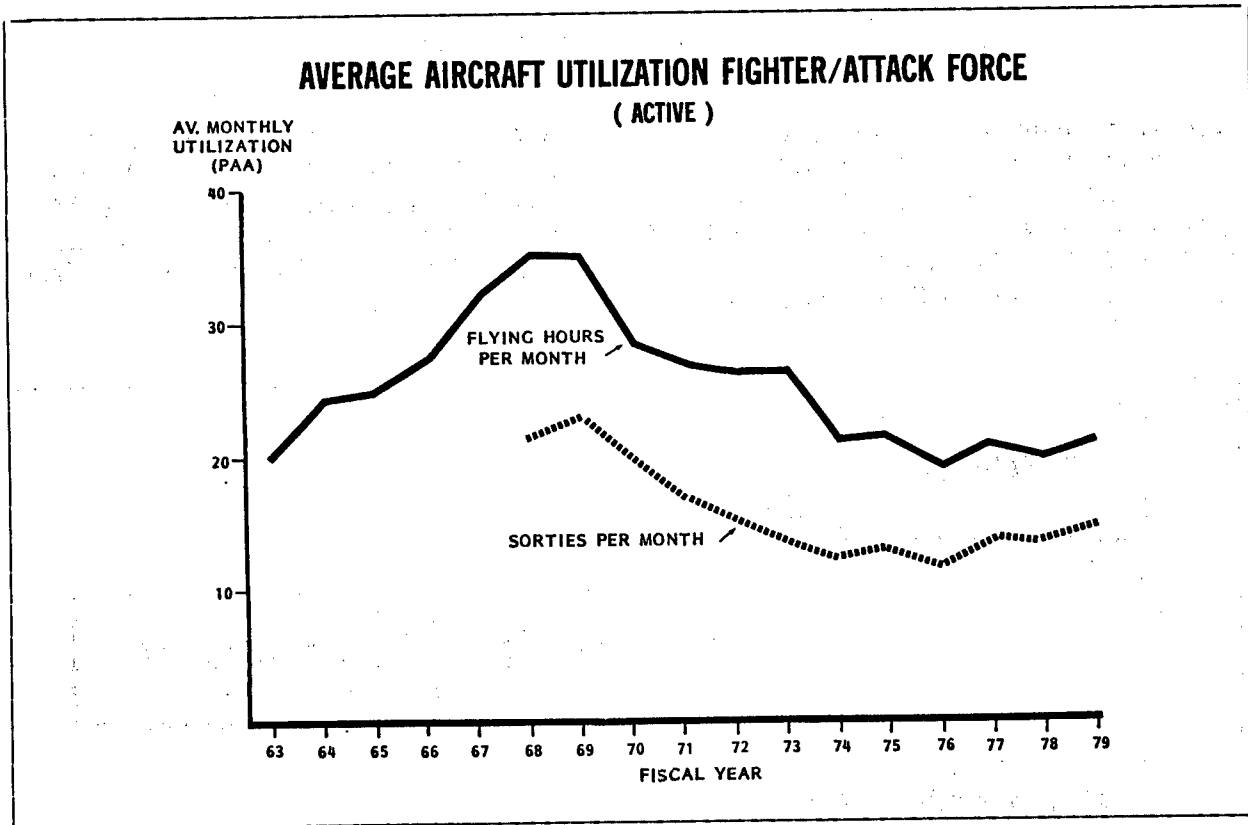
NATIONAL OBJECTIVES AND THE THREAT ARE THE BASIS OF CONCEPTS, DOCTRINE, AND STRATEGY WHICH, IN TURN, DRIVE REQUIREMENTS. IT IS AT THIS JUNCTURE THAT WE DEFINE THE HARDWARE, LOGISTICS SUPPORT, AND MANPOWER SKILLS THAT MUST BE MADE AVAILABLE TO OUR COMMANDERS IN ORDER FOR THEM TO HAVE THE CAPABILITY TO SUCCESSFULLY CARRY OUT THEIR MISSTIONS.

THE AIR FORCE IS NOT ENAMORED WITH TECHNOLOGY, AND IT CERTAINLY DOES NOT WANT TO BUY EXPENSIVE AND COMPLEX EQUIPMENT FOR ITS OWN SAKE. BUT IN MANY CASES, THE THREAT CAN BEST BE MET (IN SOME CASES CAN ONLY BE MET) BY DEVELOPING AND FIELDING WEAPON SYSTEMS THAT TAKE FULL ADVANTAGE OF THE STATE OF THE ART.

LET'S REMEMBER, THE INPUT WE DON'T CONTROL IS THE THREAT. SO, IF FOR BUDGETARY REASONS, OR ANY OTHER REASON, WE AS A COUNTRY CHOOSE NOT TO PURSUE THE PROGRAMS NEEDED TO SATISFY REQUIREMENTS, WE MUST ADJUST OUR NATIONAL OBJECTIVES OR FACE UP TO THE FACT THAT WE WON'T HAVE THE CAPABILITY TO SUPPORT THEM.

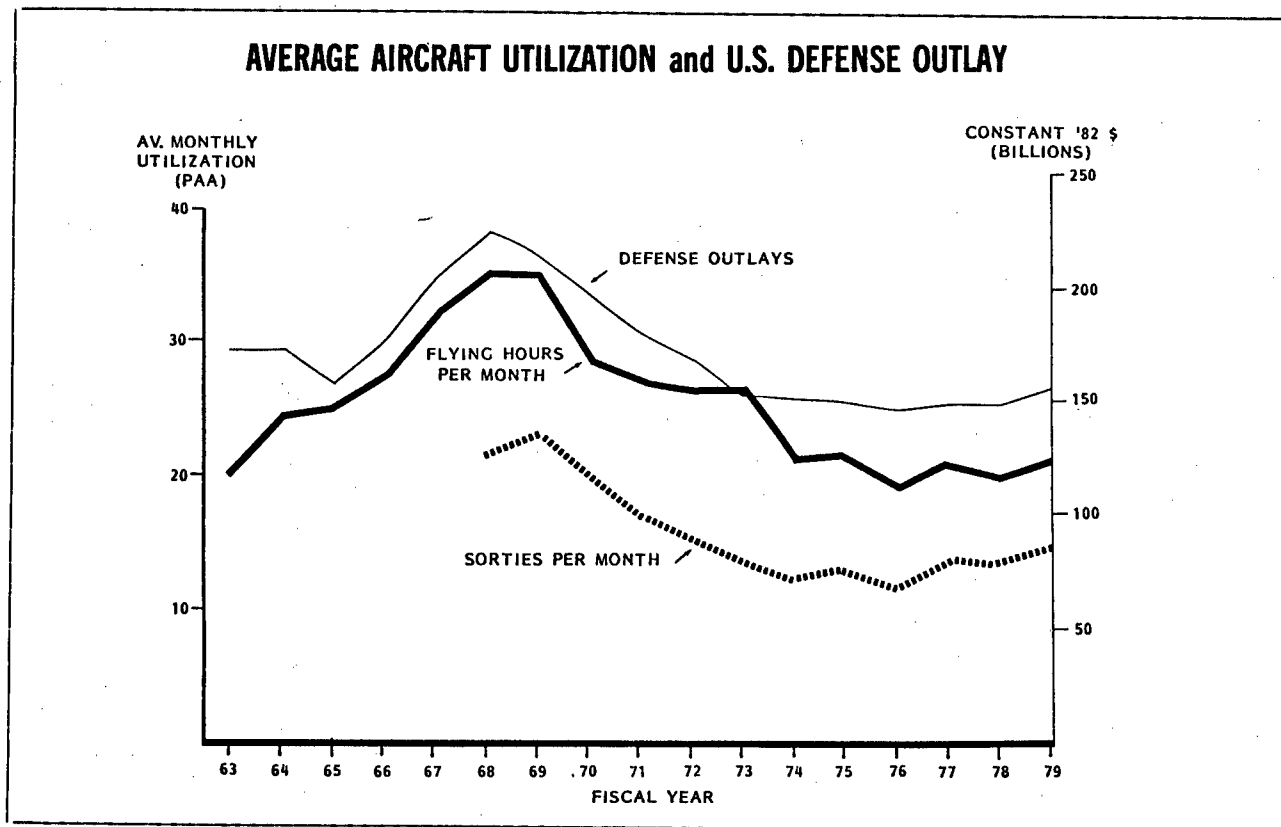
Examples of Potentially Misleading Information

NOW, LET ME SHOW YOU SOME SPECIFIC EXAMPLES OF HOW INFORMATION CAN BE MIS-INTERPRETED IF IT IS APPROACHED FROM THE POINT OF VIEW THAT DEFENSE PROBLEMS STEM FROM COMPLEXITY. A NUMBER OF THE CHARTS I WILL DISCUSS, AS WELL AS OTHERS LIKE THEM, HAVE BEEN USED IN THE QUANTITY-QUALITY DEBATE AT HIGH LEVELS OF THE GOVERNMENT AND BEFORE THE AMERICAN PUBLIC.



THE USER OF THIS FIRST CHART WOULD HAVE US BELIEVE THAT COMPLEXITY HAS PROVIDED US LESS CAPABILITY FOR MORE MONEY. STARTING IN THE EARLY SEVENTIES, JUST AS WE BEGAN FIELDING A NEW GENERATION OF FIGHTER AND ATTACK AIRCRAFT, OUR UTILIZATION RATES BEGAN DROPPING. THIS CRITIC IMPLIES WE JUST HAVE NOT BEEN ABLE TO KEEP THOSE NEW PIECES OF HIGH TECHNOLOGY FLYABLE AT RATES AS HIGH AS THEIR PREDECESSORS.

IT'S INTERESTING TO NOTE THAT FLYING HOURS AND SORTIES ROSE DURING THE VIETNAM WAR WHEN, IF YOU BELIEVE IN THE EVILS OF TECHNOLOGY, THEY SHOULD HAVE FALLEN. HOWEVER, IT'S REALLY MORE IMPORTANT TO UNDERSTAND WHY FLYING HOURS HAVE DROPPED SINCE THE VIETNAM WAR.



THIS IS THE SAME CHART, EXCEPT I HAVE OVERLAID IT WITH TOTAL U.S. DEFENSE OUTLAYS. IT ILLUSTRATES THE REAL REASONS FOR THE FLYING HOURS DROP, NAMELY THAT IT REFLECTS THE OVERALL DECREASE IN DEFENSE SPENDING AFTER THE VIETNAM WAR, A TIME DURING WHICH THERE WAS TREMENDOUS PRESSURE ON ALL MILITARY ACCOUNTS. WE SWITCHED TO THE ALL VOLUNTEER FORCE AND HAD TO ABSORB INCREASED COSTS TO PAY FOR PEOPLE. WE HAD TO REPLACE EQUIPMENT FROM VIETNAM. AND BEGINNING IN '73, FUEL COSTS INCREASED DRAMATICALLY, AFFECTING ENERGY COSTS IN GENERAL AND FLYING HOURS IN PARTICULAR. THE DROP IN FLYING HOURS WAS NOT DUE TO INCREASED COMPLEXITY, BUT RATHER TO BUDGETARY PRESSURE ON OVERALL DEFENSE SPENDING, INCLUDING READINESS, AND OPERATING AND MAINTENANCE (O&M) ACCOUNTS.

THERE ARE SEVERAL OTHER IMPORTANT POINTS THAT ARE OFTEN OVERLOOKED. FIRST OF ALL, THE AIR FORCE HAS DEMONSTRATED THAT ITS TWO MOST SOPHISTICATED PLANES, THE ALL-WEATHER, "COMPLEX" F-111s AND F-15s CAN EXCEED PLANNED SORTIE RATES WHEN THE PROPER LOGISTICS ARE AVAILABLE. DURING RECENT OPERATIONAL DEPLOYMENTS OVERSEAS, THE F-15 HAS FLOWN OVER THREE SORTIES PER DAY FOR TWO WEEKS, AND THE F-111 HAS DOUBLED ITS PLANNED WARTIME RATE.

EVEN THOUGH OUR COMPLEX WEAPON SYSTEMS HAVE PROVEN THEIR CAPABILITIES, THERE ARE SOME WHO ADVOCATE AN "INEXPENSIVE FORCE," COMPOSED OF DAY, CLEAR-WEATHER AIRCRAFT ONLY--NICE SIMPLE FIGHTERS. HOWEVER, THE SOVIETS WILL USE ALL-WEATHER OR NIGHT CAPABLE AIRCRAFT--ESPECIALLY IF OUR FORCES CAN'T RESIST THEM EFFECTIVELY. WE MUST NOT FAIL TO RECALL FROM THE HISTORY OF WAR THAT ARMIES MOVE FORWARD UNDER DARKNESS AND BAD WEATHER.

IN FACT, GERMAN SUCCESS IN THE BATTLE OF THE BULGE OCCURRED IN LARGE PART BECAUSE BAD WEATHER SHUT DOWN ALLIED AIR OPERATIONS. EVEN THOUGH WE DOMINATED THE SKIES WHEN WE COULD FLY, 9th AIR FORCE AIRCRAFT AVERAGED ONLY ONE SORTIE PER WEEK WHILE THIS CRUCIAL BATTLE RAGED UNABATED ON THE GROUND.

F-15s AND F-111s CONSTITUTE LESS THAN ONE FIFTH OF OUR FIGHTER FORCE. THAT SURELY DOESN'T SEEM UNREASONABLY HIGH TO ME FOR AN AROUND THE CLOCK, ALL-WEATHER CAPABILITY FOR AIR DEFENSE AND FOR AN ABILITY TO MOUNT OFFENSIVE OPERATIONS WITHOUT WAITING FOR DAYLIGHT OR GOOD WEATHER.

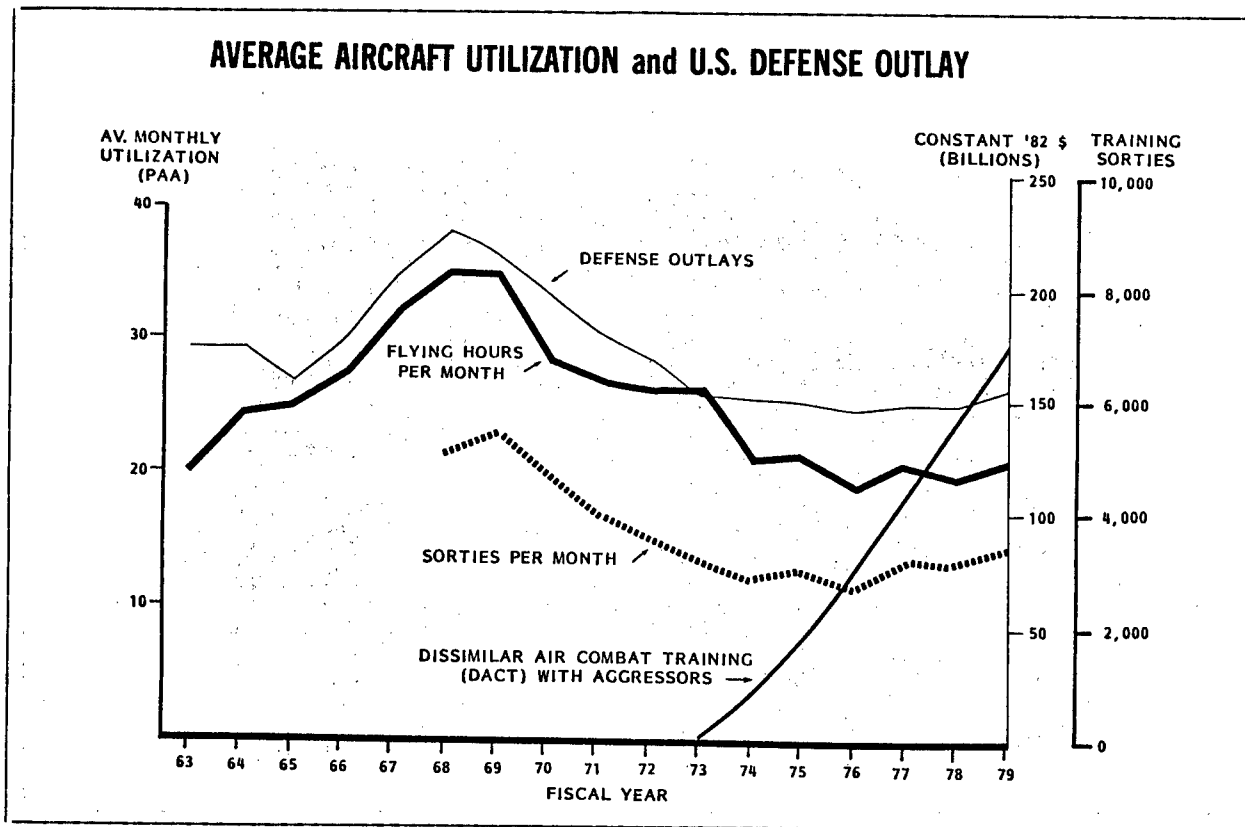
ANOTHER POINT IS THAT THE TRENDS IN FLYING HOURS BY THEMSELVES ARE NOT A GOOD MEASURE OF TRAINING, SINCE THEY DO NOT REFLECT THE CONTRIBUTIONS OF IMPROVING TRAINING PROGRAMS OR THE CHANGING TRAINING REQUIREMENTS TO MEET THE GROWING THREAT. THE AIR FORCE CONTINUALLY STRIVES FOR WAYS TO IMPROVE THE USE OF AVAILABLE FLYING HOURS. IT'S BEEN THESE INNOVATIONS AND IMPROVEMENTS IN OUR TRAINING PROGRAMS OVER THE LAST DECADE THAT HAVE MADE IT POSSIBLE TO MAINTAIN A HIGHER LEVEL OF COMBAT AIRCREW CAPABILITY THAN THE SIGNIFICANT REDUCTION IN FLYING HOURS WOULD INDICATE.

THE TECHNOLOGICAL IMPROVEMENTS IN NEWER AIRCRAFT WEAPON SYSTEMS HAVE ALSO AIDED US IN MAINTAINING OUR LEVEL OF TRAINING. FOR EXAMPLE, THE ELECTRONIC FLIGHT CONTROL SYSTEM ON THE F-16 ALLOWS AN INEXPERIENCED PILOT TO MANEUVER MORE SAFELY AND CONSISTENTLY AT THE HIGH TURN RATES NEEDED TO WIN IN COMBAT. THE FLIGHT CONTROL SYSTEM CAN ADJUST THE PILOT'S INPUTS TO PREVENT HIM FROM EXCEEDING THE MAXIMUM AERODYNAMIC PERFORMANCE LIMITS. THIS AVOIDS OVERSTRESSING THE AIRFRAME OR DEPARTURE FROM CONTROLLED FLIGHT. ALSO, THE CURRENT INERTIAL NAVIGATION SYSTEMS, HEAD-UP COCKPIT DISPLAYS, AND AUTOMATED MAPS MAKE IT POSSIBLE TO ACHIEVE A GIVEN LEVEL OF NAVIGATION PROFICIENCY WITHIN FEWER TRAINING HOURS.

THERE IS NO DOUBT THAT THE AIR FORCE HAS VASTLY ENHANCED ITS CAPABILITIES TO TRAIN REALISTICALLY. WE CONTINUE TO INCREASE OUR USE OF DEPLOYMENTS AND EXERCISES. INCREASED IN-THEATER TRAINING OF CONUS-BASED AIRCREWS IS VERY BENEFICIAL. THE AIR NATIONAL GUARD AND AIR FORCE RESERVE PARTICIPATED WITH THE ACTIVE AIR FORCE IN OVER 6,000 SORTIES LAST YEAR. OVER 6,400 PERSONNEL (AIRCREWS, MAINTENANCE, AND SUPPORT) WERE INVOLVED. IN 1981 THERE WERE ALSO 20 COMPOSITE FORCE EXERCISES CONDUCTED BY TACTICAL AIR FORCES. THIS IS A THREEFOLD INCREASE IN JUST THE LAST FOUR YEARS, WITH A PROGRAMMED DOUBLING OF SCHEDULED SORTIES FOR 1982.

BATTLE STAFF TRAINING DURING "BLUE FLAG" EXERCISES ENHANCES OUR CAPABILITY TO COMMAND AND CONTROL OUR TACTICAL FORCES. LESSONS LEARNED ALLOW BOTH THE AIRCREWS AND C³ FORCES TO SOLVE PROBLEMS PRIOR TO ACTUAL COMBAT. IN RECENT YEARS, WE HAVE CONDUCTED 15 FULL-SCALE EXERCISES AND TRAINED OVER 11,000 PEOPLE.

IN THE MID-SEVENTIES, WE BEGAN "RED FLAG" EXERCISES AT NELLIS AIR FORCE BASE IN NEVADA TO PROVIDE A MORE REALISTIC TRAINING ENVIRONMENT THAN HAD EVER BEFORE BEEN AVAILABLE TO TACTICAL AIRCREWS.



THE ADDED LINE ON THE ABOVE CHART REFLECTS THE GROWTH IN RED FLAG AND SIMILAR EXERCISES THAT PROVIDE A PORTION OF THIS QUALITY COMBAT TRAINING. BY 1981, WE REACHED OVER 9000 SORTIES PER YEAR IN SIMULATED COMBAT AGAINST SURROGATE AGGRESSOR AIRCRAFT, AND WE PLAN TO MAINTAIN ABOUT THAT LEVEL IN THE FUTURE. PLUS, AIR FORCE UNITS, FLYING AMONG THEMSELVES, LOGGED ANOTHER 20,000 DISSIMILAR AIR COMBAT TRAINING (DACT) SORTIES DURING THE YEAR.

THE TECHNICALLY ADVANCED, AIR-TO-AIR TRAINING RANGES AVAILABLE AT RED FLAG AND OTHER LOCATIONS ARE JUST ONE ASPECT OF THE QUALITY TRAINING THAT ENABLES US TO MAKE EXTREMELY EFFECTIVE USE OF THE LIMITED FLYING HOURS CURRENTLY AVAILABLE.

IN ADDITION, WE HAVE MADE GREAT STRIDES IN SIMULATORS, USING TECHNOLOGY THAT WAS NOT AVAILABLE BEFORE THE SEVENTIES, SO NOW OUR PILOTS GET BETTER TRAINING ON THE GROUND. THAT'S NOT REFLECTED AT ALL ON THE CHART.

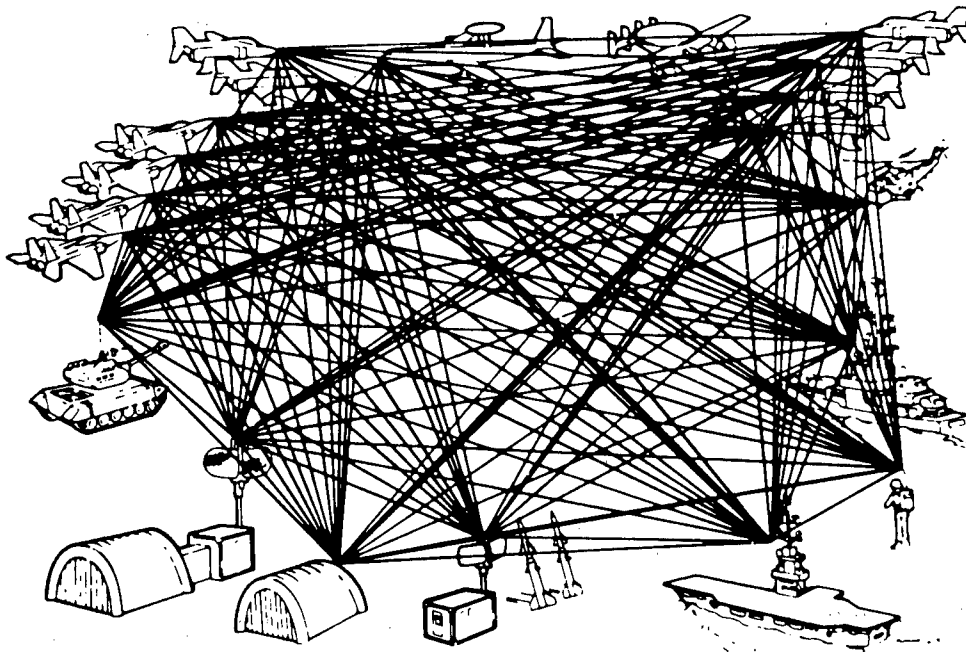
THAT DOESN'T MEAN THAT WE ARE HAPPY WITH THE FLYING HOURS SITUATION--WE'RE NOT. MODERN TACTICAL AIR WARFARE CONTINUES TO BECOME MORE DEMANDING AND COMPLEX. MISSION TASKING IS INCREASING, AND MUCH OF THE EXECUTION IS VERY TIME-CRITICAL.

WE CAN'T FORGET IT IS STILL THE THREAT THAT DRIVES THE OVERALL LEVEL OF FLYING TRAINING REQUIREMENTS. OUR IMPROVEMENTS IN TRAINING ARE CONTINUING TO BE OFFSET BY THE INCREASING REQUIREMENT POSED BY THE GROWING THREAT.

THERE IS NO COMPLETE SUBSTITUTE FOR EXPERIENCE IN THE AIR. ADDITIONAL FLYING HOURS ARE DEFINITELY NEEDED, AND WE CONTINUE TO ARTICULATE THIS NEED. AN UPTURN CAN ALREADY BE SEEN ON THE CHART, WHICH WILL CONTINUE IF THE DEFENSE BUDGET GROWS AS PLANNED. OUR LIMITS ARE STRICTLY BUDGETARY, NOT TECHNOLOGY OR COMPLEXITY.

JTIDS

INFORMED PILOTS KILL MORE AND LIVE LONGER



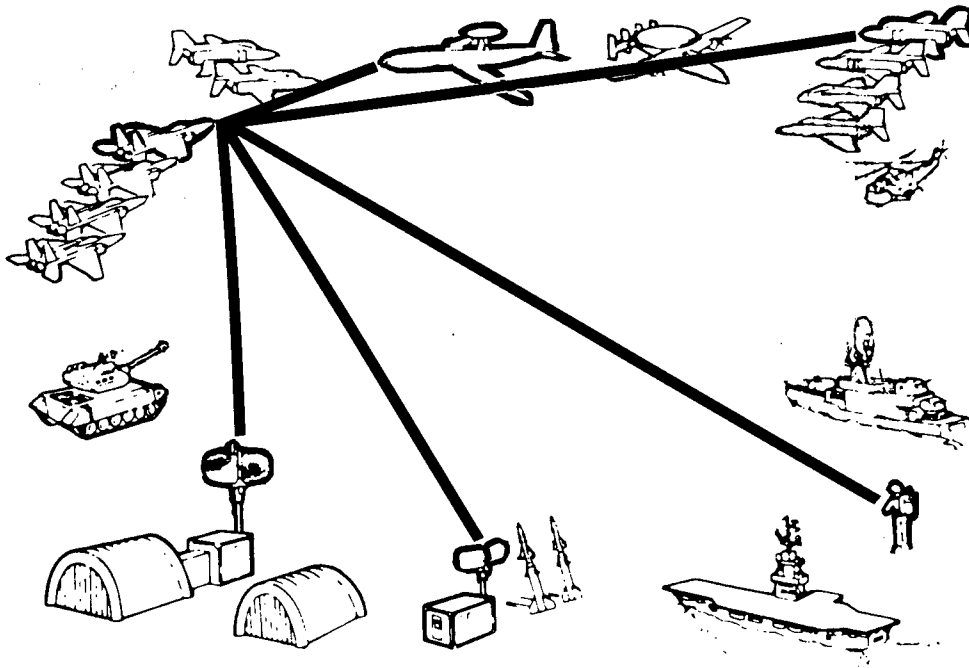
HERE'S ANOTHER CHART THAT CAN BE MISINTERPRETED DUE TO ITS VISUAL IMPACT. IT'S INTERESTING TO NOTE THAT ITS ORIGINAL PURPOSE WAS AS PART OF A CONTRACTOR'S REPORT TO ILLUSTRATE THE CAPABILITIES OF THE JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM, OR JTIDS.

SOME CRITICS HAVE USED IT TO LEAVE THE IMPRESSION OF A SYSTEM THAT IS IMPOSSIBLY COMPLEX AND PROBABLY COULD NEVER BE MADE TO WORK. HOWEVER, WE ARE SEEING ALL POSSIBLE PATHS OF COMMUNICATION FOR ALL JTIDS USERS ACTIVE AT ONCE. A SIMILAR CHART FOR USERS OF THE LOCAL TELEPHONE SYSTEM WOULD BE INFINITELY MORE COMPLEX. THE CAPTAIN OF A COMMERCIAL AIRLINER ON A TYPICAL CROSS-COUNTRY FLIGHT CAN INTERACT WITH MORE "PLAYERS" THAN ILLUSTRATED HERE.

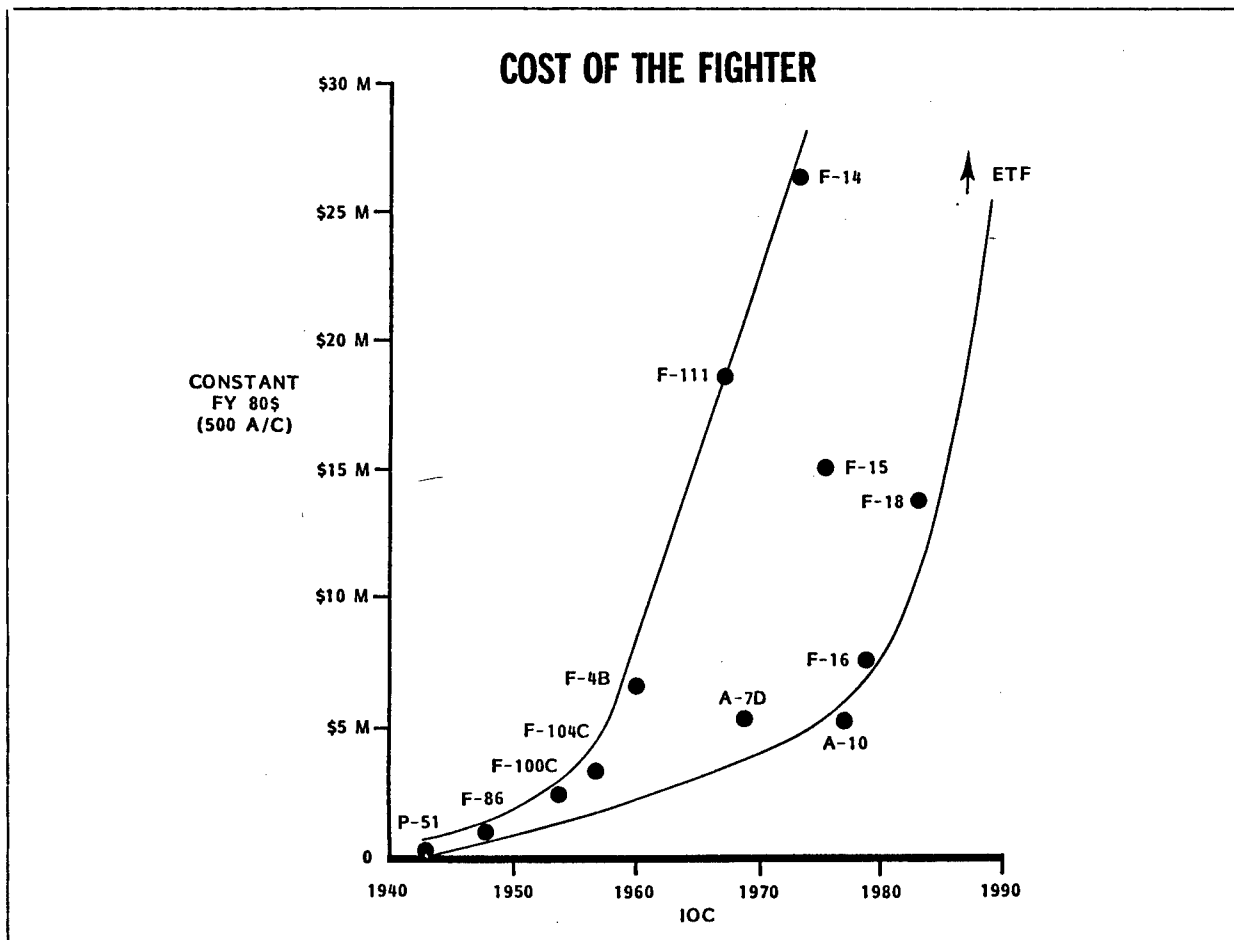
AGAIN, WE MUST GO BACK TO THE THREAT-REQUIREMENT ARGUMENT TO PUT THIS CHART IN CONTEXT. IF MANY ELEMENTS OF OUR COMBAT FORCES MUST BE ABLE TO COMMUNICATE ON A COMMON NETWORK IN ORDER TO EFFECTIVELY AND EFFICIENTLY COUNTER THE THREAT, THEN IT IS INCUMBENT UPON US TO DEVELOP AND FIELD SYSTEMS THAT MEET THAT REQUIREMENT. AS THE SLIDE IMPLIES, A TECHNICALLY SOPHISTICATED, COMPLEX SYSTEM IS NEEDED. IT MAY BE COSTLY, BUT IT WILL BE MORE COST-EFFECTIVE THAN TRYING TO EXPAND AND INTEGRATE THE WIDE VARIETY OF SYSTEMS THAT ARE CURRENTLY FIELDIED.

JTIDS

INFORMED PILOTS KILL MORE AND LIVE LONGER

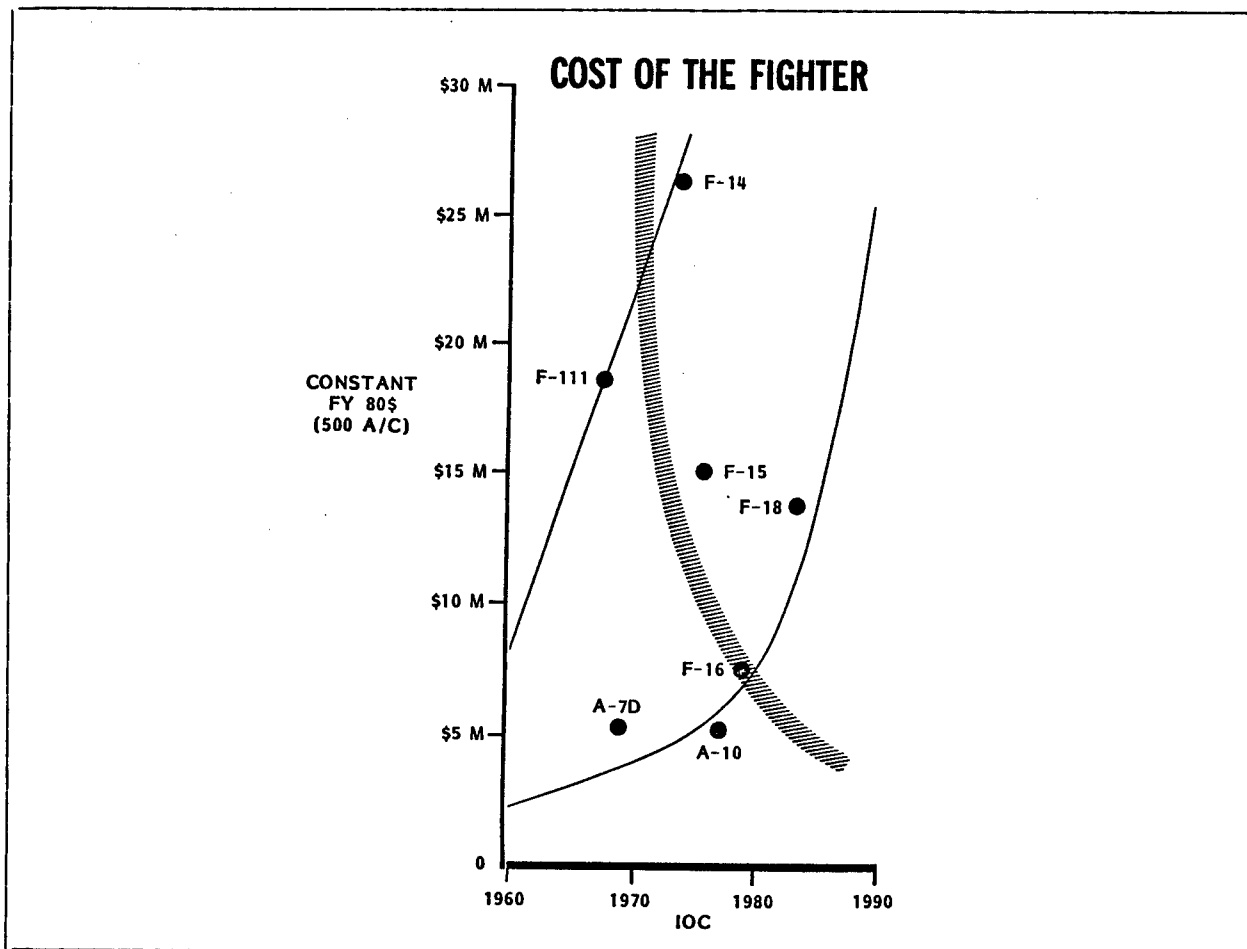


HERE IS THE SAME CHART WITHOUT AN EXCESS OF LINES. THE INTENDED MESSAGE CAN STILL BE TRANSMITTED: MANY ELEMENTS ARE REQUIRED TO COMMAND, CONTROL, AND EXECUTE A COMBAT MISSION. THESE ELEMENTS CAN BENEFIT FROM SHARED INFORMATION, USING A COMMON NETWORK. THE ORIGINAL PRINTED MESSAGE ON THE CHART IS WHAT COUNTS RATHER THAN THE VISUAL MESSAGE OF UNWORKABLE COMPLEXITY--INFORMED PILOTS DO A BETTER JOB AND LIVE LONGER.



NOW LET ME GIVE YOU AN EXAMPLE OF A "SO-CALLED" ANALYSIS WHERE HISTORICAL POINTS WERE SELECTED AND THEN PACKAGED FOR MAXIMUM VISUAL IMPACT. THE IMPRESSION FROM THE CHART IS THAT THE COST OF TACTICAL AIRCRAFT HAS BEEN INCREASING DRAMATICALLY AND IS HEADED OUT-OF-SIGHT. YOU SHOULD NOTE THAT THE "ANALYSIS" MIXES TYPES OF AIRCRAFT AND THAT THE TWO HIGHEST COSTS ARE FOR A PLANE WITH A HIGHLY SPECIALIZED, DEMANDING MISSION AND A PLANE THAT WAS NEVER BUILT.

IF THE ANALYSIS BEGINS WITH A POOR SELECTION OF DATA, THEN YOU CAN SHOW ANYTHING YOU WANT. THE NEXT CHART IS A GOOD EXAMPLE .



IF YOU THROW OUT THE ENHANCED TACTICAL FIGHTER, WHICH WASN'T BUILT, AND START THE ANALYSIS IN 1960, YOU WOULD COME TO THE CONCLUSION THAT FIGHTER COSTS ARE STEADILY DECREASING.

OF COURSE, THAT'S NO MORE CORRECT THAN THE FIRST WAY. IN FACT, ITS WORSE SINCE COSTS PER AIRCRAFT ARE REALLY RISING. BUT, IT DOES ILLUSTRATE HOW AN AUDIENCE CAN BE MISLEAD BY MIXING MISSIONS, THROWING IN AIRCRAFT BUILT FOR HIGHLY SPECIALIZED MISSIONS OR NEVER BUILT AT ALL, AND SELECTING POINTS TO SUPPORT PRECONCEIVED POSITIONS. A PROPER ANALYSIS OF AIR-TO-AIR FIGHTER AIRCRAFT WOULD ACTUALLY SHOW AN ANNUAL COST GROWTH OF ABOUT 6%--CONSIDERABLY LESS THAN THE IMPRESSION GIVEN BY THE CHART.

MORE IMPORTANT TO THE DECISION-MAKER IS AN UNDERSTANDING OF THE THREAT TO AND THE COST-EFFECTIVENESS OF EACH AIRCRAFT/WEAPON SYSTEM. AS TO THE THREAT, YOU MUST BE ABLE TO SATISFY MINIMUM REQUIREMENTS. FOR EXAMPLE, IF THE ENEMY HAS A BEYOND VISUAL RANGE MISSILE CAPABILITY (WHICH HE DOES), YOU MUST TOO--OR YOU MAY NEVER GET INTO VISUAL RANGE. IF YOU GET INTO A DOG-FIGHT, I AGREE YOU WANT A PLANE THAT CAN OUTFLY THE ENEMY, BUT YOU DON'T WANT TO TAKE A CHANCE ON GETTING BLOWN OUT OF THE SKY BEFORE YOU SEE HIM, AND YOU DON'T WANT HIM TO BE ABLE TO AVOID YOU BECAUSE HE CAN FIND YOU WHEN YOU CAN'T FIND HIM.

IN REALITY, WHEN YOU CONSIDER EFFECTIVENESS AND LIFE CYCLE COSTS, RATHER THAN JUST ACQUISITION COSTS, HIGHLY CAPABLE AIRCRAFT ARE COST-EFFECTIVE. MY PEOPLE MADE AN EXTENSIVE STUDY OF QUALITY AND QUANTITY AIRCRAFT IN A EUROPEAN SCENARIO. WE FOUND THAT, IF YOU REPLACED F-15s WITH AN EQUAL COST FORCE OF DAY, CLEAR WEATHER FIGHTERS, OUR OVERALL CAPABILITY TO FIGHT AND WIN ACTUALLY DECLINED EVEN THOUGH YOU COULD BUY THREE TO FOUR DAY FIGHTERS FOR THE COST OF AN F-15.

LET ME GIVE YOU AN EXAMPLE OF THE PAYOFF OF A QUALITY WEAPON, USING THE CAMPAIGN AGAINST THE THAHN HOA BRIDGE IN VIETNAM.

THAHN HOA BRIDGE CAMPAIGN

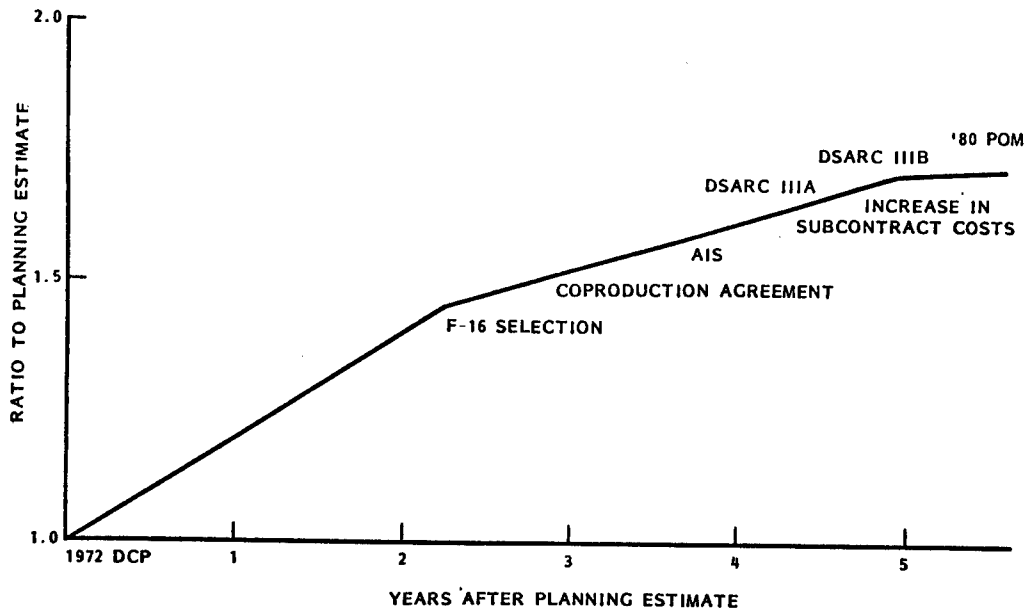
	<u>GENERAL PURPOSE BOMB</u>	<u>GUIDED MUNITION</u>
SORTIES	873	8
AIRCRAFT LOSSES	11	0
SUCCESS	NO	YES

WITH DUMB, UNGUIDED BOMBS, WE FLEW 873 SORTIES AGAINST THE THAHN HOA BRIDGE, LOST 11 PLANES, AND CONTINUALLY FAILED TO DO THE JOB. WHEN WE GOT LASER GUIDED BOMBS, EIGHT F-4s WITH TWO BOMBS EACH DESTROYED THE BRIDGE IN ONE MISSION WITH NO LOSSES. IF YOUR MEASURE OF EFFECTIVENESS IS TO GENERATE SORTIES, THEN LARGE QUANTITIES OF DUMB BOMBS IS THE WAY TO GO. BUT, IF YOU WANT TO KILL BRIDGES, OTHER HARD TARGETS, OR WELL DEFENDED TARGETS, SMART WEAPONS ARE GOING TO BE MORE COST EFFECTIVE; AND, WE COULD HAVE USED THE REMAINING 865 SORTIES FOR OTHER CRITICAL MISSIONS.

ON THE OTHER HAND, THERE ARE JOBS WHICH DUMB BOMBS ARE SUITED TO HANDLE. AS YOU MOVE TO SOFTER, WIDE-AREA TARGETS OR UNDEFENDED TARGETS, THEY BECOME MORE COST-EFFECTIVE--ESPECIALLY WHERE QUALITY AIRCRAFT AVIONICS ARE USED TO IMPROVE DELIVERY ACCURACY.

THE BOTTOM LINE IS THAT A HIGH-LOW MIX OF WEAPONS IS THE MOST COST-EFFECTIVE APPROACH TO COUNTERING A SPECTRUM OF THREATS, AND YOU CAN'T FOREGO THE HIGH END OF THE MIX BECAUSE THE ENEMY WILL TAKE ADVANTAGE OF YOUR WEAKNESS AND ATTACK WHEREVER YOU LEAVE AN OPENING.

LWF/F-16 PROGRAM COST **(CONSTANT FY 75 DOLLARS, 650 AIRCRAFT PROGRAM)**

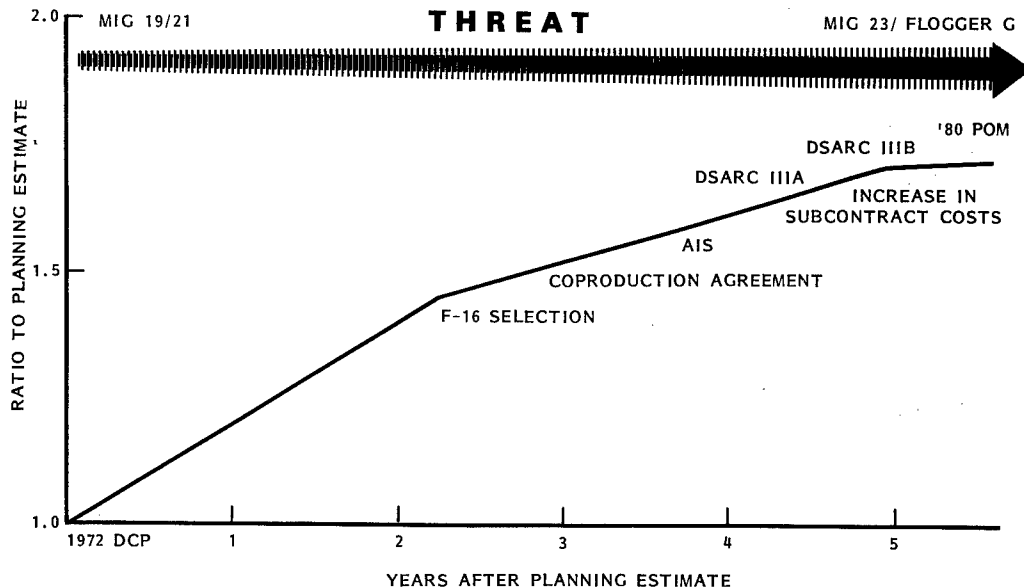


THIS CHART ADDRESSES A SINGLE WEAPON SYSTEM, THE LIGHTWEIGHT FIGHTER, OR LWF, PROGRAM THAT EVOLVED INTO THE F-16.

THE 1972 DECISION COORDINATING PAPER (DCP) THAT SERVED AS A POINT-OF-DEPARTURE FOR THE LWF CONCEPT WAS CHOSEN BY SOME CRITICS AS A BASELINE FOR COST COMPARISONS. FROM THAT POINT, COSTS APPEAR TO HAVE EXPERIENCED AN "UNCONTROLLED" 50% GROWTH IN ONLY TWO YEARS. THESE CRITICS WOULD ARGUE THAT THIS REFLECTS AN UNPLANNED INCREASE IN COMPLEXITY AND QUESTION WHETHER THERE WAS ANY REAL IMPROVEMENT IN CAPABILITY. IN FACT, THEY GIVE THE IMPRESSION THAT COMPLEXITY WILL ACTUALLY LOWER EFFECTIVENESS.

I WON'T ARGUE WITH THE DATA POINTS, BUT IF YOU WANT AN AUDIENCE TO FULLY UNDERSTAND WHAT IS REFLECTED ON THE CHART YOU SHOULD MAKE SURE THAT THEY UNDERSTAND THREE TRENDS THAT GENERALLY AFFECT ANY PROGRAM BETWEEN CONCEPTUAL DEFINITION AND DEPLOYMENT.

LWF/F-16 PROGRAM COST (CONSTANT FY 75 DOLLARS, 650 AIRCRAFT PROGRAM)



THE FIRST IS THAT THE THREAT CHANGES. IN 1972, THE THREAT WAS MIG-19s AND -21s; BUT, BY THE TIME OF THE F-16 PRODUCTION DECISION, WE WERE WORRIED ABOUT THE MIG-23 OR FLOGGER. AND, SINCE SOVIET AVIONICS AND MUNITIONS HAVE PROGRESSED OVER TIME, THE FLOGGER WILL HAVE THE FIRST SHOT OPPORTUNITY IN ENGAGEMENTS WITH F-16s.

THE SECOND TREND IS THAT OF INCREASING CAPABILITY AND EXPANDED MISSIONS OVER TIME. IN 1972, THE DCP DEFINED THE LOW SIDE OF A HIGH-LOW MIX AND SERVED AS THE BASIS FOR THE FLYOFF COMPETITION BETWEEN THE YF-16 AND YF-17. THE ULTIMATE PRODUCTION DESIGN FOR A FOLLOW-ON BUY WAS STILL IMMATURE. THE COMPETITION HIGHLIGHTED AERODYNAMIC PERFORMANCE IN A CLOSE IN, VISUAL TURNING ENGAGEMENT. AIR-TO-AIR CAPABILITY WAS THE PRIME CRITERIA.

HOWEVER, AS THE AIR FORCE BEGAN TO CONSIDER OVERALL FORCE STRUCTURE REQUIREMENTS FOR THE EIGHTIES, THE ROLE OF A F-16 TYPE AIRCRAFT TOOK ON ADDITIONAL DIMENSIONS. THE F-4 FLEET, WITH ITS AIR-TO-GROUND CAPABILITY, HAD BEEN AGED BY THE VIETNAM WAR AND NEEDED REPLACEMENT. THE F-16 WAS FOUND TO BE A SUITABLE AIRFRAME FOR THE JOB, AND IT'S ROLE WAS THUS EXPANDED FROM THE LOW END OF THE AIR-TO-AIR MIX TO INCLUDE A SIGNIFICANT AIR-TO-GROUND MISSION.

AS WITH MOST SYSTEMS, WE WILL CONTINUE TO IMPROVE THE F-16, BUT WE WILL DO IT BASED ON ANALYSIS AND REASONED JUDGMENT--NOT ON A BLIND PURSUIT OF NEW TECHNOLOGY.

THE THIRD TREND CONCERNS COST VERSUS COMMITMENT. PROGRAM DECISION POINTS ARE STRUCTURED TO DEFINE THE SYSTEM IN PROGRESSIVELY MORE AND MORE DETAIL BEFORE WE COMMIT TO LARGE EXPENDITURES. RATHER THAN USING THE DCP AS A STARTING POINT, IT WOULD HAVE BEEN BETTER TO START AT THE F-16 SELECTION POINT, WHEN WE AT LEAST KNEW WHICH PLANE WAS CHOSEN FOR DEVELOPMENT.

I WON'T DENY THAT PROGRAM COSTS INCREASE OVER TIME, BUT YOU CAN'T FREEZE COSTS AND PERFORMANCE AT THE POINT OF CONCEPT DEFINITION. AS THE THREAT CHANGES, WE INCORPORATE IMPROVEMENTS IN OUR SYSTEMS TO MAINTAIN THEIR EFFECTIVENESS. IT'S NOT FREE, BUT ITS GENERALLY THE CHEAPEST WAY TO MEET THE THREAT. IF WE WERE STILL FLYING B-52s AS THEY WERE CONCEIVED AFTER WORLD WAR II, I DOUBT IF THEY WOULD EVEN GET OFF THE RUNWAY, MUCH LESS PENETRATE SOVIET DEFENSES.

Low Cost Doesn't Mean High Cost-Effectiveness

YOU MIGHT ASK WHY I DON'T IGNORE POOR ANALYTICAL WORK AND LET IT BE DISCREDITED AS RESULTS PROVE IT WRONG. UNFORTUNATELY, ITS NOT THAT EASY. UNLESS DECISION MAKERS ARE PRESENTED COMPREHENSIVE, BALANCED ANALYSES THAT DEMONSTRATE THE COST-EFFECTIVENESS OF QUALITY SYSTEMS, THEY MAY NOT REALIZE THEIR INFORMATION IS INCOMPLETE.

THE PICTURE IS FURTHER COMPLICATED BY SOVIET PROPAGANDA EFFORTS OF THE TYPE I MENTIONED EARLIER--EFFORTS AIMED AT CREATING A BIAS TOWARD U.S. PROGRAMS THAT MAKE US APPEAR, AT BEST, TO BE LOST IN A MINDLESS PURSUIT OF BIGGER AND BETTER WEAPONS AND, AT WORST, TO BE WAR MONGERS.

WHEN ALL THAT IS REINFORCED BY THE NEGATIVE IMAGES OF THE MILITARY-INDUSTRIAL COMPLEX AND THE SEDUCTIVE PROMISE OF MORE CAPABILITY FOR LESS MONEY, WE END UP IN DANGER OF NOT GETTING THE FORCES WE NEED TO FIGHT A WAR.

I'VE SPENT A LOT OF TIME ANALYZING AIRPOWER IN BOTH CONVENTIONAL AND NUCLEAR CONFLICTS, AND I AM CERTAIN THAT IF WE HAD TO GO UP AGAINST MODERN SOVIET FIGHTERS WITH LOTS OF LOW COST FIGHTERS, WE WOULD END UP GETTING LOTS OF OUR LOW QUALITY PLANES DESTROYED.

THE LOW COST AIRCRAFT OPTION ALSO TURNS OUT TO BE A FALSE ECONOMY WHEN YOU CONSIDER ALL THE COSTS OF OPERATING SUCH A FORCE, RATHER THAN JUST THE INITIAL PURCHASE PRICE. SINCE LOW COST PLANES MEAN LESS CAPABLE PLANES, YOU NEED MORE OF THEM. IN TURN, YOU NEED MORE PILOTS, MORE MAINTENANCE PEOPLE, MORE BASES, MORE CHOW HALLS, MORE TRAINING, MORE FUEL, MORE SPARES, MORE MUNITIONS, AND SO ON, AND SO ON. WHEN YOU PUT IT ALL TOGETHER, THE "LOW COST" APPROACH COSTS MORE IN THE LONG TERM.

THE NEXT TIME YOU HEAR THE GLORIES OF SIMPLE, LOW COST AIRCRAFT TOUTED AND THE TECHNOLOGY OF OUR MODERN AIRCRAFT CONDEMNED, REMEMBER THAT THE SIMPLE AIRCRAFT APPROACH WILL YIELD A FORCE STRUCTURE THAT WOULD SACRIFICE MORE OF OUR PLANES IN COMBAT--AND WOULD COST US MORE TO BOOT. THIS DOES NOT MEAN THAT WE NEED OUR BEST PLANES FOR ALL MISSIONS. THERE ARE JOBS THAT LOW COST, LESS CAPABLE PLANES ARE DESIGNED TO HANDLE, BUT WHEN OUR PILOTS GO UP AGAINST NEW SOVIET FIGHTERS AND DEFENSES, I FOR ONE WANT THEM TO HAVE THE EQUIPMENT THEY NEED.

Rationale for the B-1 Decision

I'VE FOCUSED ON TACTICAL SYSTEMS TO THIS POINT, BUT I NOW WANT TO DISCUSS SOME OF THE KEY RATIONALE BEHIND THE RECENT DECISION TO PRODUCE A NEW BOMBER.

IT IS EASY TO GET THE WRONG OPINION OF THE B-1 FROM THE NEWSPAPERS AND TELEVISION DUE TO STATEMENTS FROM WELL-MEANING, BUT ILL-INFORMED OR OUT-OF-DATE EXPERTS --OR FROM CRITICS WHO WILL USE ANYTHING THEY CAN TO FIGHT DEFENSE EXPENDITURES.

B-1 DECISION

- TODAY'S B-1 IS NOT THE PLANE CANCELLED IN 1977
- B-1 AND ADVANCED TECHNOLOGY BOMBER (ATB) NEEDED
- WE CAN AFFORD THEM

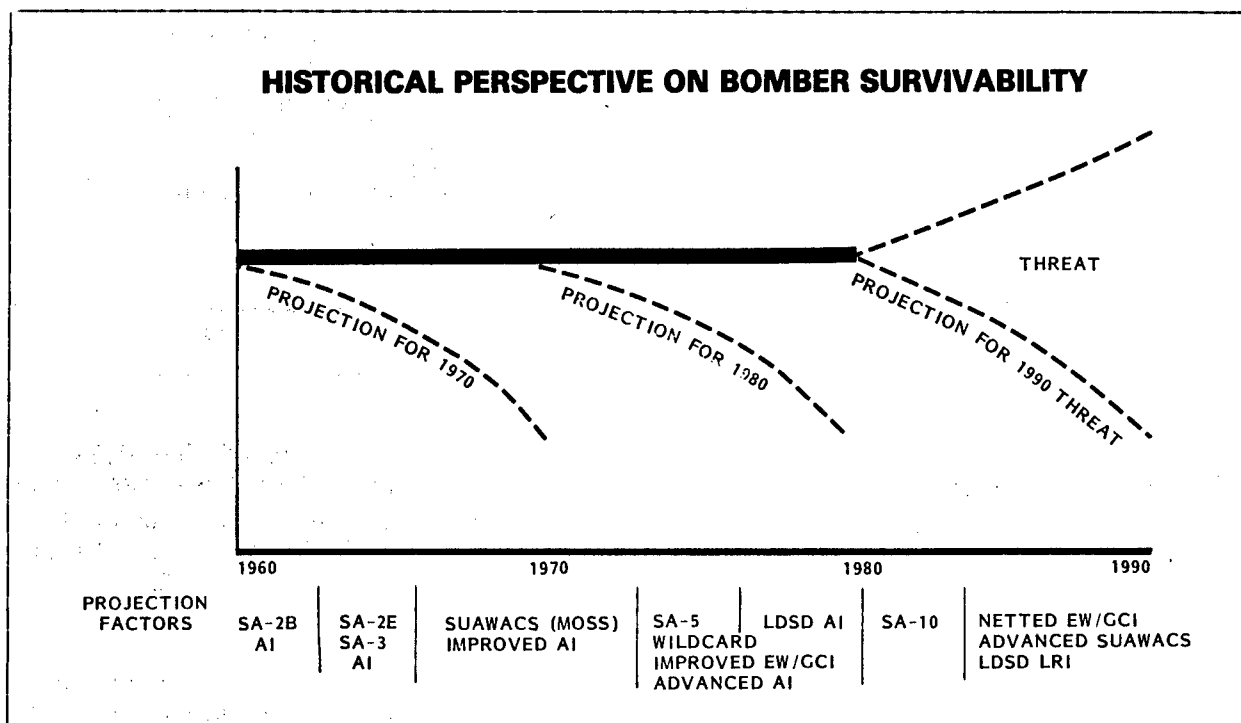
YOU WILL HEAR FROM MANY DETRACTORS OF THE B-1 DECISION. THEY WILL HAVE THREE BASIC COMPLAINTS. FIRST, THAT THE B-1 WAS CANCELLED IN 1977 BECAUSE IT WOULD NOT BE ABLE TO PENETRATE SOVIET DEFENSES. I WILL EXPLAIN HOW THINGS HAVE CHANGED SINCE THEN AND WHY WE NOW EXPECT THE B-1 WILL BE EFFECTIVE.

SECOND, SOME SAY THAT THE B-1 IS JUST AN INTERIM FIX AND THAT WE SHOULD SKIP IT AND GO STRAIGHT TO THE ADVANCED TECHNOLOGY BOMBER--WHICH I WILL CALL THE ATB. YOU CAN THINK OF THE ATB AS THE STEALTH BOMBER, ALTHOUGH THE DESIGN HAS BEEN CHANGED SINCE IT WAS FIRST ANNOUNCED. I WILL GIVE YOU THE REASONS WHY WE NEED BOTH PLANES AND EXPLAIN HOW THE B-1 WILL BE USED WHEN WE HAVE THE ATB.

THIRD, WE ARE BEING TAKEN TO TASK ON COSTS. I'M ALL FOR ELIMINATING UNNECESSARY GOVERNMENT COSTS, BUT I DON'T PUT THE B-1 IN THAT CATEGORY. I WILL GIVE YOU SOME COMPARATIVE COSTS SO YOU CAN MAKE YOUR OWN JUDGMENT ON WHETHER OR NOT THE U.S. CAN AFFORD TO MODERNIZE THE STRATEGIC BOMBER FORCE AS ANNOUNCED BY PRESIDENT REAGAN.

ON THE FIRST POINT--WHAT HAS CHANGED SINCE 1977 TO MAKE B-1 DEPLOYMENT A GOOD DECISION NOW WHEN IT WAS REJECTED FOUR YEARS AGO--ASIDE FROM THE FACT THAT OUR B-52s ARE ANOTHER FOUR YEARS OLDER, AND THEIR EFFECTIVENESS WILL BE SEVERELY LIMITED BY THE LATE EIGHTIES.

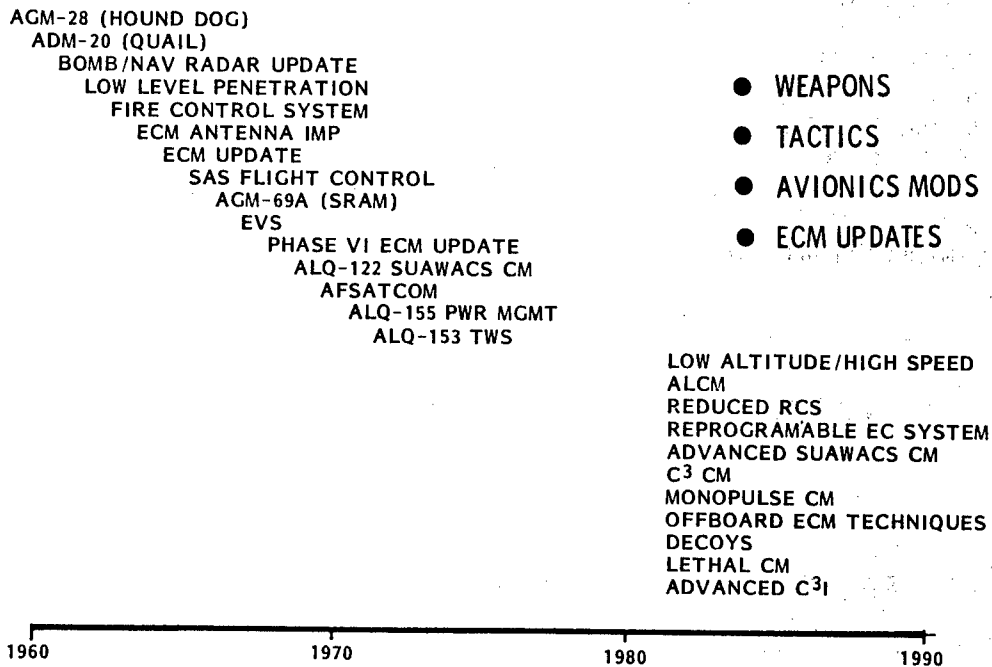
THE MOST DRAMATIC CHANGE IS IN TECHNOLOGY. WE ARE GOING TO USE NEW TECHNOLOGY TO MAKE THE RADAR CROSS SECTION (RCS) OF THE B-1 ONE TENTH AS LARGE AS IT WAS IN 1977 AND ONLY ONE-ONE HUNDREDTH THAT OF THE B-52. WHEN WE DO THAT, IT WILL BE HARDER FOR THE SOVIETS TO FIND OUR PLANES AND MUCH EASIER FOR US TO CONFUSE THEIR DEFENSES WITH ELECTRONIC COUNTERMEASURES OR ECM. WITH THE B-1'S MUCH LOWER RADAR RETURN, ECM ALSO TAKES MUCH LESS POWER TO BE EFFECTIVE AND ALLOWS USE OF TECHNIQUES THAT ARE NOT FEASIBLE WITH THE B-52.



AS YOU CAN SEE FROM THE ABOVE CHART, IT SEEMS THAT WE ARE ALWAYS PREDICTING THAT DEFENSIVE IMPROVEMENTS WILL SEVERELY REDUCE OUR BOMBER SURVIVABILITY. SINCE THE EARLY SIXTIES, ANALYSES BASED ON INTELLIGENCE ESTIMATES HAVE PROJECTED THAT OUR ABILITY TO PENETRATE WOULD FALL OFF DUE TO NEW THREATS--SAMS, AWACS, INTERCEPTORS, ETC.

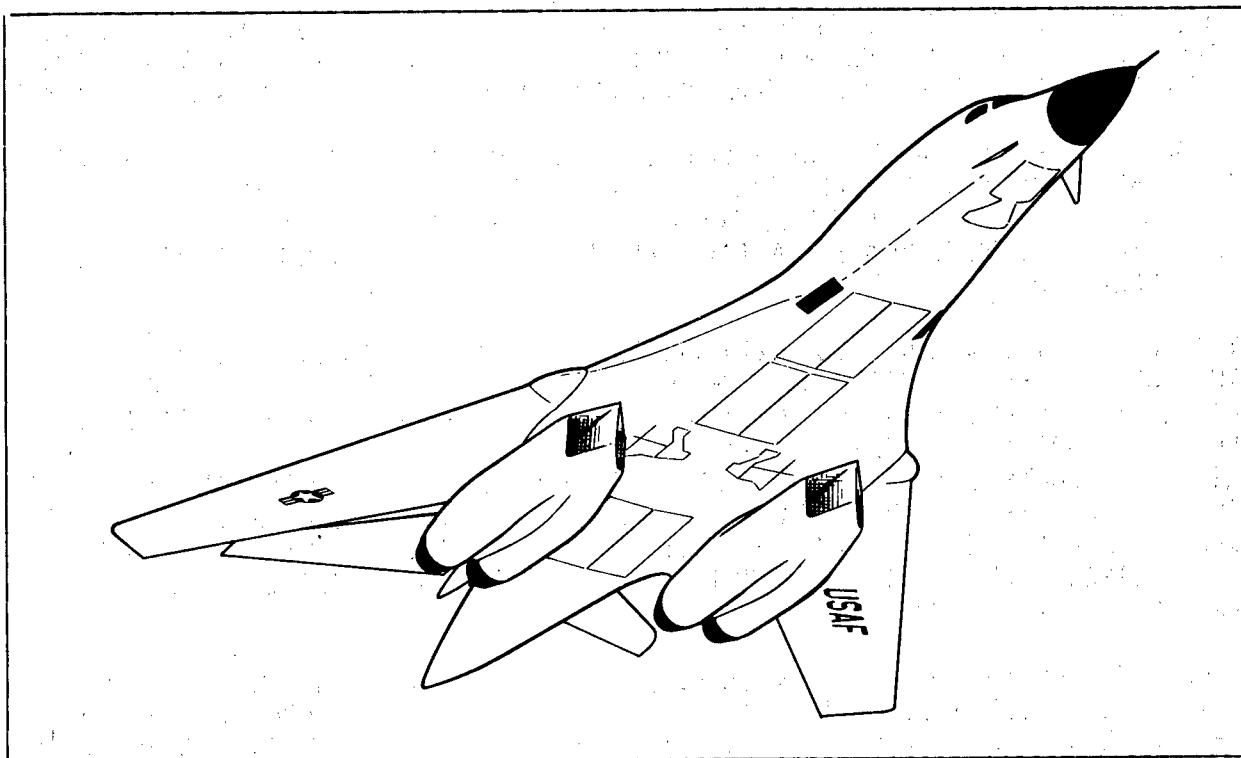
BUT, WE HAVE ALWAYS COME UP WITH A COUNTERMEASURE--A NEW JAMMER, A NEW TACTIC, OR SOMETHING WHICH ALLOWED US TO MAINTAIN OUR ABILITY TO AVOID, FOOL, OR SUPPRESS SOVIET DEFENSES. THERE'S NO REASON TO THINK THAT THE B-1 WON'T FOLLOW THE SAME HISTORY.

BOMBER SURVIVABILITY INPUTS - A "COMBINATION"



THIS CHART SHOWS SPECIFIC EXAMPLES OF SYSTEMS AND TACTICS IMPLEMENTED OVER THE YEARS AS WELL AS A MENU, ON THE RIGHT, OF SURVIVABILITY TECHNIQUES THAT WILL SUSTAIN B-1 EFFECTIVENESS AS A PENETRATOR WELL INTO THE NINETIES. THE DETAILS ARE NOT IMPORTANT, BUT YOU SHOULD REMEMBER THAT A WIDE VARIETY OF METHODS EXIST TO MAINTAIN B-1 EFFECTIVENESS AND PREVENT SOVIET DEFENSES FROM GAINING THE ADVANTAGE.

SINCE 1977, WE HAVE HAD SOME HIGHLY SIGNIFICANT BREAKTHROUGHS IN ECM TECHNOLOGY. IT'S NOW CLEAR THAT WE WILL DO FAR BETTER AGAINST SOVIET DEFENSES THAN WAS PREDICTED BY EVEN THE MOST OPTIMISTIC PROJECTIONS FROM 1977. AND, THESE ARE NOT JUST PAPER BREAKTHROUGHS. THEY HAVE BEEN TESTED ON THE B-1 AGAINST SURROGATE SOVIET SYSTEMS--AND THEY WORK.



ALMOST EVERYONE HAS SEEN PICTURES OF THE B-1. IT'S AN IMPRESSIVE PLANE, BUT THERE ARE SOME FEATURES THAT ARE NOT OBVIOUS. FOR EXAMPLE, THE B-1 CAN FLY LOWER AND MUCH FASTER THAN THE AGING B-52. SINCE 1977, WE HAVE ALSO MADE SOME DESIGN CHANGES WHICH IMPROVED THE SUBSONIC PERFORMANCE OF THE AIRCRAFT AND INCREASED THE PAYLOAD BY OVER 20 PERCENT. EACH PLANE CAN NOW DO A BIGGER AND BETTER JOB. OVERALL, THE CHANGES HAVE BEEN SO SIGNIFICANT THAT WE NOW CALL IT THE B-1B RATHER THAN B-1.

IN 1977, THE B-1 WAS ANALYZED AS IF IT HAD TO PENETRATE THE SOVIET UNION WITHOUT ANY BALLISTIC MISSILES BEING USED TO WEAKEN THE DEFENSES--AND WE HAD NO PLANS TO BUILD CRUISE MISSILES. NOW, OUR ANALYSIS CONSIDERS HOW OUR INTERCONTINENTAL AND SUBMARINE LAUNCHED BALLISTIC MISSILES WILL WEAKEN THE SOVIET DEFENSES AND HOW CRUISE MISSILES WILL HELP SATURATE AND DILUTE ANY REMAINING DEFENSES. OVERALL, THE RESULTS TODAY ARE FAR BETTER THAN WE PROJECTED FOUR OR FIVE YEARS AGO.

ANOTHER BIG DIFFERENCE IN TODAY'S APPROACH IS THAT A BROAD RANGE OF MISSIONS WERE EXAMINED, RATHER THAN CONCENTRATING ON THE USE OF THE B-1 FOR A SINGLE, MASSIVE NUCLEAR ATTACK ON THE SOVIET UNION. THE PROPER WAY TO THINK OF THE B-1B IS AS A VERSATILE PLANE THAT CAN DELIVER A VERY LARGE PAYLOAD--NUCLEAR OR CONVENTIONAL, ANYWHERE IN THE WORLD, IN SPITE OF ANY MOVES TO STOP IT. IT IS SUPERBLY SUITED FOR POWER PROJECTION OR FOR A SHOW OF FORCE SHORT OF ACTUAL CONFLICT.

IT CAN PERFORM MARITIME MISSIONS OF SEA SURVEILLANCE, MINE LAYING, AND ANTI-SHIP WARFARE. OUR NAVAL FORCES CAN NOT COVER ALL AREAS OF THE GLOBE AT ONCE. THE B-1B CAN FURNISH FIREPOWER SIMILIAR TO THAT OF A LARGE AIRCRAFT CARRIER WITH JUST A FEW SORTIES PER DAY UNTIL ARRIVAL OF NAVAL FORCES. IT CAN ALSO PROVIDE CONVENTIONAL FIREPOWER TO REMOTE AREAS TO SUPPORT ELEMENTS OF A RAPID DEPLOYMENT FORCE BEFORE THEY GAIN A FOOTHOLD OR COMPLEMENT ANY OTHER IN-PLACE FORCES.

WE ALSO LOOKED AT THE B-1B IN A NEW STRATEGIC ROLE. OVER THE PAST FEW YEARS, POLICY MAKERS IN THE UNITED STATES HAVE REALIZED THAT WE SHOULD BE BETTER PREPARED TO FIGHT A LONG NUCLEAR WAR. IT HAS BECOME CLEAR THAT THE SOVIETS ARE PREPARING TO CONDUCT MILITARY OPERATIONS LONG AFTER INITIAL NUCLEAR ATTACKS.

I DON'T THINK THEY WANT SUCH A WAR, BUT SHOULD WAR OCCUR, FOR WHATEVER REASON, THEY INTEND TO SURVIVE AND WIN. IF THEY COME TO BELIEVE THAT THEY WOULD WIN, THEY MAY BE MORE WILLING TO ESCALATE TO NUCLEAR WAR IN A CRISIS OR CONVENTIONAL WAR. TO PRECLUDE SUCH A SITUATION, THE REAGAN ADMINISTRATION DECIDED TO IMPROVE OUR NUCLEAR WARFIGHTING CAPABILITY.

THE FLEXIBILITY OF THE B-1B, WITH ITS RECOVERY AND RELOAD CAPABILITY AND MAN-IN-THE-LOOP, MAKES IT IDEAL FOR A WIDE VARIETY OF MISSIONS. IT CAN BE USED FOR PREPLANNED SEARCH MISSIONS TO FIND AND ATTACK MOBILE TARGETS OR TARGETS WHOSE LOCATIONS ARE NOT PRECISELY KNOWN. OUR OTHER STRATEGIC FORCES ARE ONLY GOOD AGAINST TARGETS THAT ARE FIXED AND PRECISELY LOCATED. WITH MAN IN THE LOOP, THE B-1B CAN BE USED TO CHECK THE STATUS OF A TARGET BEFORE USING ANY REMAINING WEAPONS AGAINST IT. A GOOD EXAMPLE IS MISSILE SILOS. BY FIRST CHECKING TO SEE WHETHER THEY ARE INTACT AND HAVE MISSILES IN THEM, THE B-1B CREW CAN MAKE BEST USE OF ITS ARMAMENT.

A KEY TO DETERRENCE IS TO BE ABLE TO PUT AT RISK THOSE THINGS THAT SOVIET LEADERSHIP HOLDS MOST DEAR--INCLUDING THEIR LARGE LAND FORCES. FOR EXAMPLE, THE SOVIETS HAVE DEPLOYED EXTENSIVE DEFENSIVE FORCES ALONG THEIR BORDERS, WHICH WE EXPECT TO BE OUT-OF-GARRISON, THUS NOT SUBJECT TO EFFECTIVE ATTACK BY BALLISTIC OR CRUISE MISSILES. YOU CAN IMAGINE HOW THEY MIGHT VIEW AN AMERICAN LONG RANGE WEAPON SYSTEM THAT COULD SEARCH FOR, LOCATE, AND DESTROY THESE FORCES AND LEAVE THEIR BORDERS OPEN TO COUNTERATTACKS.

IN SUM, THE B-1B DECISION MAKES SENSE DUE TO TECHNOLOGICAL BREAKTHROUGHS, DESIGN IMPROVEMENTS, AN APPRECIATION OF THE SYNERGISTIC EFFECTS OF B-1B AND OUR OTHER STRATEGIC FORCES, AND ITS ABILITY TO PERFORM A WIDE RANGE OF CONVENTIONAL AND STRATEGIC MISSIONS.

B-1 DECISION

- TODAY'S B-1 IS NOT THE PLANE CANCELLED IN 1977
- B-1 AND ADVANCED TECHNOLOGY BOMBER (ATB) NEEDED
- WE CAN AFFORD THEM

TURNING TO THE SECOND POINT, DO WE NEED BOTH THE B-1B AND THE ADVANCED TECHNOLOGY BOMBER? IN LARGE PART, THE ANSWER STEMS FROM THE EARLY AVAILABILITY OF THE B-1B. WE HAVE HIGH CONFIDENCE IN ITS SCHEDULE AND PERFORMANCE PROJECTIONS.

WE HAVE INVESTED OVER \$5 BILLION IN RESEARCH AND DEVELOPMENT AND HAVE CONDUCTED A VERY SUCCESSFUL BOMBER PENETRATION EVALUATION PROGRAM. B-52 EFFECTIVENESS AS A PENETRATING AIRCRAFT WILL BE SEVERELY ERODED IN THE LATE EIGHTIES, AND THE B-1B WILL BE AVAILABLE AS A TIMELY REPLACEMENT THAT WILL BE ABLE TO PENETRATE SOVIET DEFENSES WELL INTO THE NINETIES.

ATB TECHNOLOGY IS EXCITING, BUT WE DON'T HAVE ANYWHERE NEAR THE SAME DEGREE OF CONFIDENCE IN IT. AS A RESULT OF STUDIES DIRECTED BY THE SECRETARY OF DEFENSE, WE FOUND THAT ACCELERATING DEVELOPMENT OF THE ATB WOULD INCREASE PROGRAM RISKS, AND COULD RESULT IN A LESS CAPABLE AIRCRAFT BEING DEPLOYED. SINCE WE ARE STILL PROVING OUR ATB TECHNOLOGY, WE HAVE INITIATED A RISK REDUCTION PROGRAM COMPATIBLE WITH DEVELOPING THE ATB AT THE FASTEST REASONABLE PACE. THE SOONEST WE CAN DEPLOY IT, HOWEVER, IS THE EARLY NINETIES. WE WILL NOT GET IT FASTER WITH MORE MONEY BECAUSE TIME IS REQUIRED TO DEVELOP AND PROVE THE BASIC TECHNOLOGY. WHILE EXCITING, THE ATB JUST WON'T BE AVAILABLE AS SOON AS A B-52 REPLACEMENT IS NEEDED.

CONCERNS HAVE BEEN EXPRESSED THAT THE EFFORT AND MONEY DEVOTED TO THE B-1B WILL DETRACT FROM ATB DEVELOPMENT AND DELAY ITS DEPLOYMENT. HOWEVER, AS THE SECRETARY OF DEFENSE HAS TESTIFIED TO CONGRESS, THE DOD BUDGET REQUEST CONTAINS FUNDS TO DEVELOP BOTH ON THE FASTEST REASONABLE SCHEDULES, AND CANCELLING THE B-1B WOULD NOT GET US THE ATB ANY SOONER.

WHEN WE DO GET THE ATB, THE COMBINATION OF THE ATBs, B-1Bs, AND CRUISE MISSILES WILL MAXIMIZE STRESS ON SOVIET AIR DEFENSES DUE TO THE VARIETY OF THREATS THEY WILL HAVE TO CONTEND WITH. FOR EXAMPLE, IF THE SOVIETS DESIGNED PROXIMITY FUSES FOR THEIR SURFACE-TO-AIR OR AIR-TO-AIR MISSILES TO USE AGAINST A B-1B WITH ECM, THE FUSE WOULD NOT DETONATE AGAINST AN ATB WITH ITS MUCH LOWER RADAR RETURN. ON THE OTHER HAND, IF THEY ARE DESIGNED FOR THE ATB, THEY WOULD DETONATE PREMATURELY AGAINST A B-1B.

HENCE, A COMBINATION OF FORCES KEEPS THE SOVIETS FROM OPTIMIZING THEIR DEFENSES FOR A SINGLE THREAT. THEY WILL BE FORCED TO MAKE COMPROMISES, AND OVERALL U.S. EFFECTIVENESS WILL BE INCREASED. SOVIET CONFIDENCE IN THEIR DEFENSES WILL BE ERODED, WITH U.S. DETERRENCE BEING ENHANCED ACCORDINGLY.

FURTHERMORE, THE B-1B WILL BE ABLE TO CARRY CRUISE MISSILES AND CONDUCT THE OTHER MISSIONS I DISCUSSED THROUGHOUT ITS ESTIMATED 30-YEAR LIFE. SO, THE B-1B IS NOT AN INTERIM AIRCRAFT. IT WILL COMPLEMENT THE ATB AND CONTRIBUTE TO CONVENTIONAL AND STRATEGIC MISSIONS WELL INTO THE NEXT CENTURY.

LASTLY, THE SOVIETS MUST SPEND ON DEFENSE WITH SUCH A FORCE FACING THEM; FAR BETTER THAN TO PERMIT THAT TREASURY TO BE SPENT ON OFFENSE.

IN THE DRIVE TO SAVE MONEY, IT'S TEMPTING TO FOREGO A PROGRAM WITH THE JUSTIFICATION THAT IT IS NOT MUCH BETTER THAN WHAT WE ALREADY HAVE, OR THAT THERE IS SOMETHING EVEN BETTER JUST AROUND THE CORNER. BUT, THE FUTURE IS HARD TO PREDICT. LET ME READ YOU A SHORT PASSAGE FROM AVIATION WEEK--PUBLISHED ON 5 JANUARY 1953--ALMOST 29 YEARS AGO.

NO DECISION HAS BEEN REACHED YET, BUT A PROPOSAL IS CIRCULATING AROUND USAF HEADQUARTERS TO ELIMINATE ALL BUT A SMALL PART OF THE BOEING B-52 PRODUCTION PROGRAM. FEELING IN SOME USAF QUARTERS IS THAT THE DIFFERENCE BETWEEN B-47 AND B-52 PERFORMANCE IS NOT WORTH THE COST OF THE LATTER PROGRAM. STRATEGIC AIR COMMAND ALSO ANTICIPATES GETTING SUPERSONIC BOMBERS SOON ENOUGH TO MAKE THE B-52 STRICTLY A SHORT INTERIM MEASURE.

I DOUBT IF ANYONE IN 1953 FORESAW THAT THE B-52 WOULD BE THE BACKBONE OF OUR STRATEGIC BOMBER FORCE FOR OVER 30 YEARS.

LET ME GIVE YOU A LITTLE MORE OF AN HISTORICAL PERSPECTIVE ON U.S. BOMBER FORCES. IN THE LATE FIFTIES, BEFORE WE STARTED TO RETIRE B-47s, WE HAD OVER 1700 STRATEGIC BOMBERS. BY THE END OF THE SIXTIES WE HAD RETIRED THE B-47s AND DEPLOYED B-58s--BUT TOTAL NUMBERS DROPPED UNDER 600. TODAY, THE B-58s ARE GONE, AND WE HAVE FB-111s--AND, WE ARE NOW DOWN UNDER 400 STRATEGIC BOMBERS.

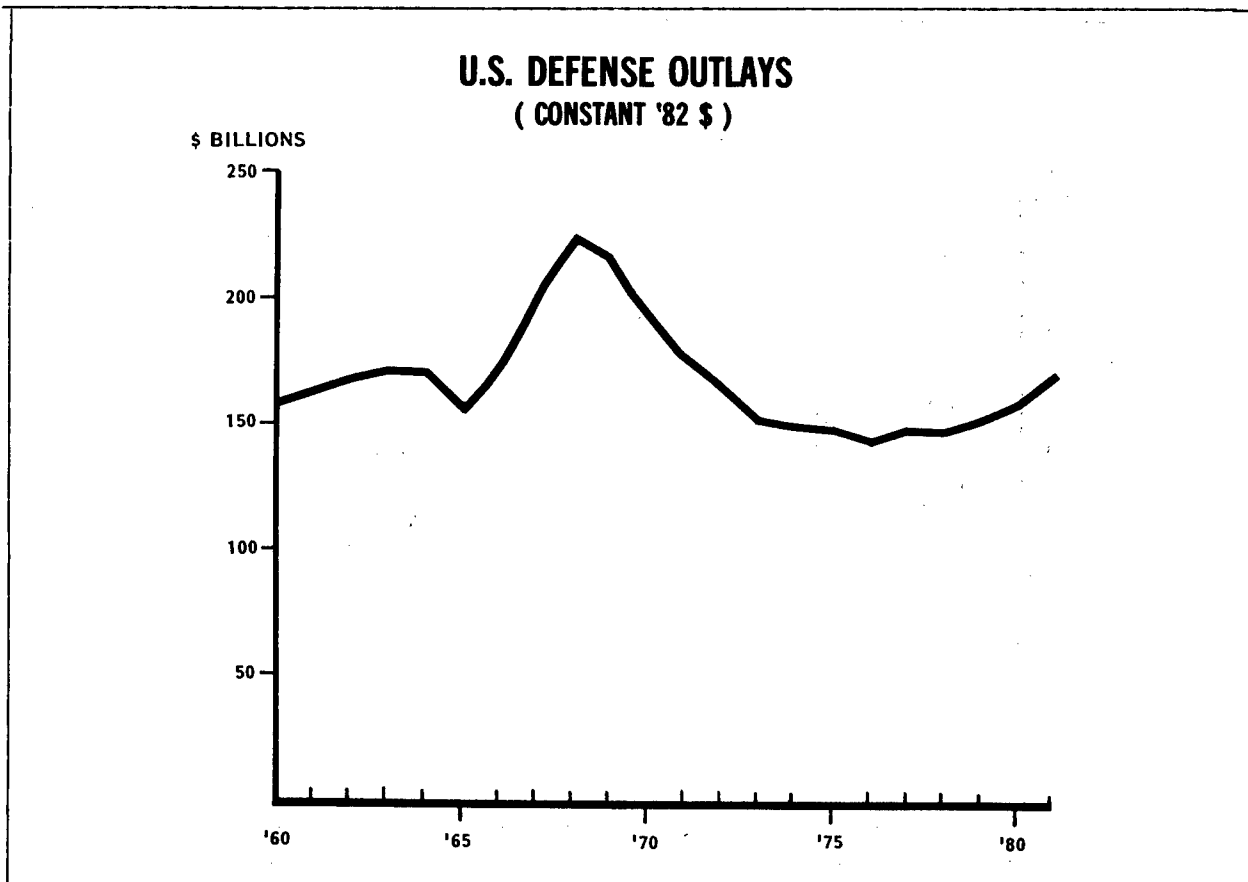
BY THE TIME THE ATB AND B-1B ARE FULLY DEPLOYED, THE FB-111s WILL BE RETIRED WITH OVER 20 YEARS OF SERVICE, AND THE B-52s WILL BE RETIRED WITH WELL OVER 30 YEARS OF SERVICE. THEN, EVEN IF WE BUY ALL THE ATBs AND B-1s THAT ARE NOW PLANNED, WE WILL DROP UNDER THE 250 MARK.

SO, I DON'T THINK IT MAKES SENSE TO SKIP THE B-1B. EVEN IF WE DID, WE COULDN'T SAVE MUCH BECAUSE OF COSTS TO SQUEEZE THE LAST OUNCE OF BLOOD OUT OF OUR CURRENT FORCES AND COSTS TO PROVIDE FOR THE FOREGONE CAPABILITIES OF THE B-1B.

Defense Costs

LET ME NOW TURN TO DEFENSE COSTS. IT HAS BEEN ARGUED THAT THE MILITARY BUDGET IS MORE OR LESS FIXED AND THAT--IN SPITE OF ANY SOVIET THREAT OR U.S. MILITARY REQUIREMENTS--WE SHOULD ACCEPT CURRENT BUDGET LEVELS. THEN, SINCE WE CAN'T AFFORD THE QUALITY FORCES WE NEED, WE SHOULD BUY GREATER NUMBERS OF SIMPLE FORCES.

LET'S EXPLORE THE IMPLICATIONS OF THAT ASSUMPTION A LITTLE FURTHER.

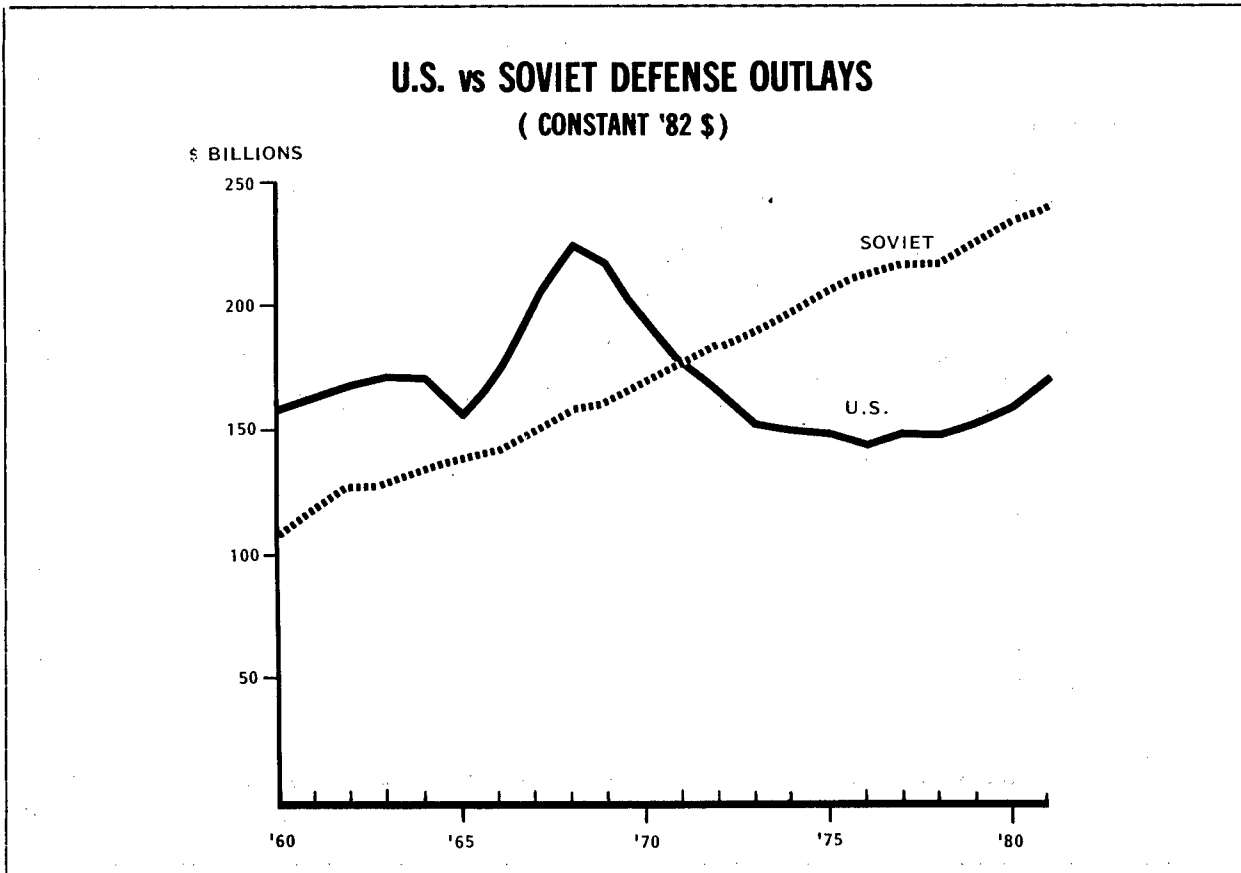


THIS CHART SHOWS U.S. DEFENSE SPENDING OVER THE PAST 20 YEARS--THE SAME COSTS THAT I SHOWED YOU ON A EARLIER CHART COMPARING U.S. AND SOVIET DEFENSE OUTLAYS.

SOME SKEPTICS VIEW THE PATTERN OF U.S. SPENDING IN THE SEVENTIES AS HISTORICAL PROOF THAT WE AS A COUNTRY WON'T SUPPORT SUBSTANTIAL DEFENSE INCREASES, SO WE SHOULD ACQUIESCE TO THE LOW COST APPROACH TO WAR. THEY DON'T SEEM TO RECOGNIZE THAT WE WILL SPEND MORE WHEN THE COUNTRY AGREES ON THE NEED, SUCH AS IN WARTIME. NOR DO THEY THINK THAT THE CURRENT UPTURN IN DEFENSE SPENDING IS ANYTHING MORE THAN AN ABERRATION.

IN FACT, MANY OF THE READINESS AND MAINTENANCE PROBLEMS THEY CITE AS PROOF THAT COMPLEX SYSTEMS WON'T WORK STEM FROM MEAGER FUNDING IN THE SEVENTIES. AFTER THE VIETNAM WAR, A CONSCIOUS CHOICE WAS MADE TO FIRST MODERNIZE OUR FIFTIES AND SIXTIES FIGHTERS AND THEN RESTORE READINESS AND SUSTAINABILITY. BUT THEN, OUR READINESS ACCOUNTS WERE HARD HIT BY UNPRECEDENTED AND UNFORESEEN INFLATION, AND WE SUFFERED THE CONSEQUENCES. FORTUNATELY, THE PROBLEM IS RECOGNIZED, AND THE CURRENT LEADERSHIP IS COMMITTED TO RECTIFYING IT.

THE PROPER CONTEXT IN WHICH TO VIEW THIS CHART IS WHETHER OR NOT WE ARE INVESTING SUFFICIENTLY TO SATISFY OUR NATIONAL AND MILITARY OBJECTIVES, IN VIEW OF STEADILY INCREASING SOVIET CAPABILITY.

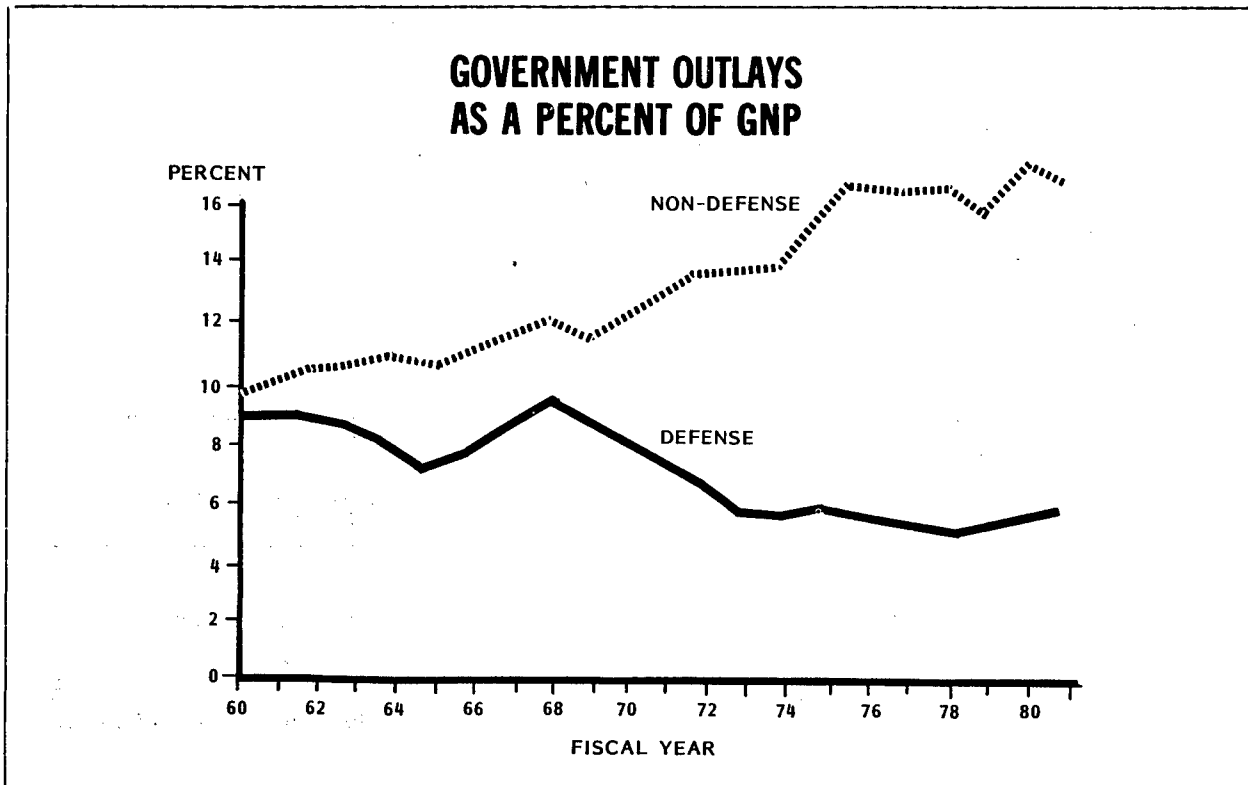


ADDING SOVIET COSTS GIVES US THE SAME COMPARISON AS EARLIER. THE SOVIET LINE REPRESENTS THE THREAT WE FACE, AND WE WON'T BE ABLE TO FACE IT BY SAYING WE WON'T GET THE MONEY WE NEED SO LET'S GIVE UP ON THE VERY TECHNOLOGY THAT HISTORICALLY HAS GIVEN US A COMPETITIVE EDGE AND MINIMIZED OUR CASUALTIES.

WITHOUT A QUALITATIVE EDGE, WE COULD END UP WHERE THE SOVIETS WERE IN THE SIXTIES. WE ARE ALREADY SPENDING LESS THAN THE SOVIETS, AND WE COULD BE PUT IN A POSITION OF BUYING INFERIOR EQUIPMENT ON TOP OF THAT.

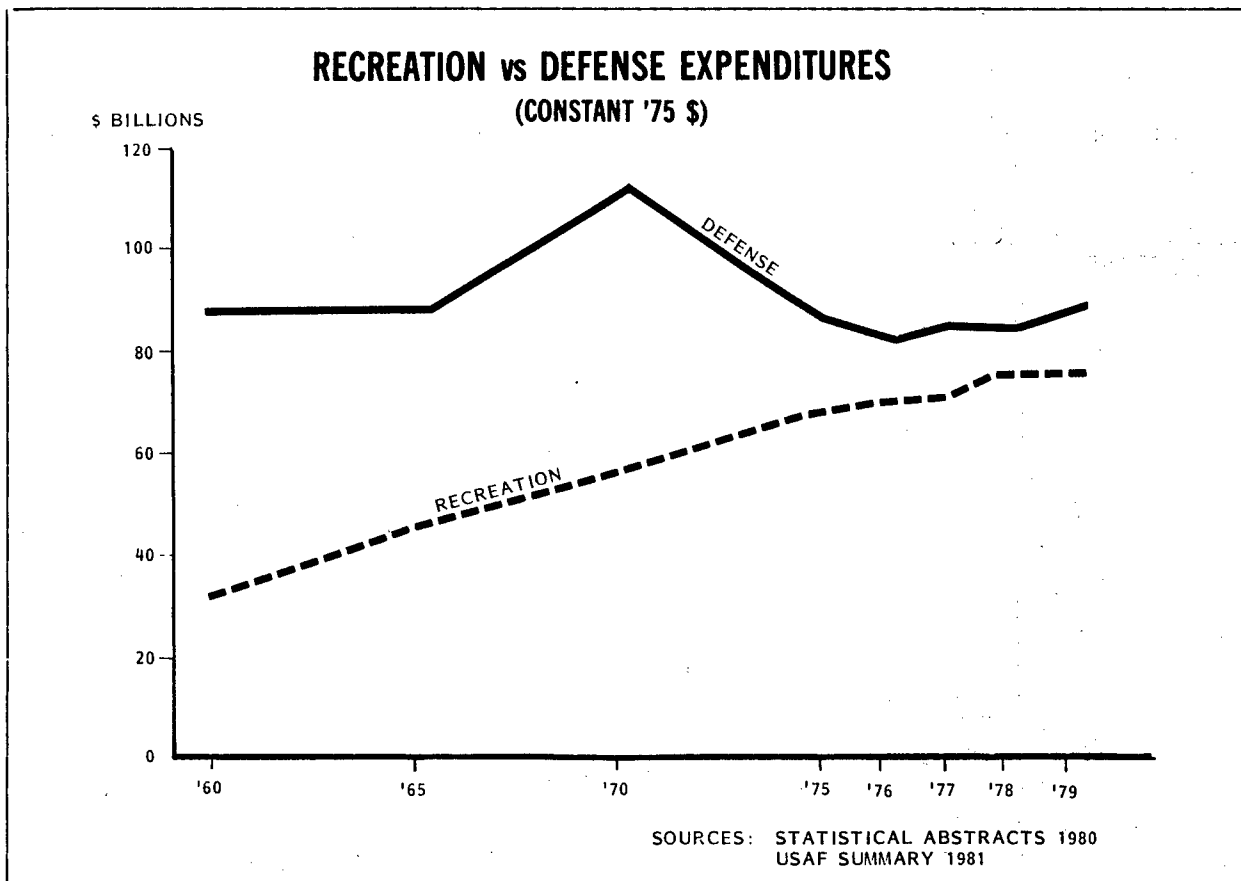
Can We Afford Defense Modernization?

THE REAL QUESTION IS THEN, "CAN WE AS A NATION AFFORD TO RESPOND TO THE SOVIET THREAT?" DEFENSE IS TAKING A LOT OF FLAK RIGHT NOW BECAUSE OF CUTS IN OTHER GOVERNMENT PROGRAMS, WHILE THE DEFENSE BUDGET HAS NOT BEEN CUT BACK PROPORTIONATELY. LET'S LOOK AT SOME FIGURES TO PUT MILITARY EXPENDITURES IN THEIR PROPER PERSPECTIVE.



THIS CHART COMPARES DEFENSE SPENDING TO OTHER FEDERAL EXPENDITURES, IN TERMS OF PERCENT OF GROSS NATIONAL PRODUCT. AS YOU CAN SEE, DEFENSE AND NON-DEFENSE OUTLAYS WERE ABOUT THE SAME IN 1960; BUT NOW, THE PERCENTAGE OF FUNDS GOING TO NON-DEFENSE SPENDING IS ABOUT THREE TIMES AS MUCH AS TO DEFENSE.

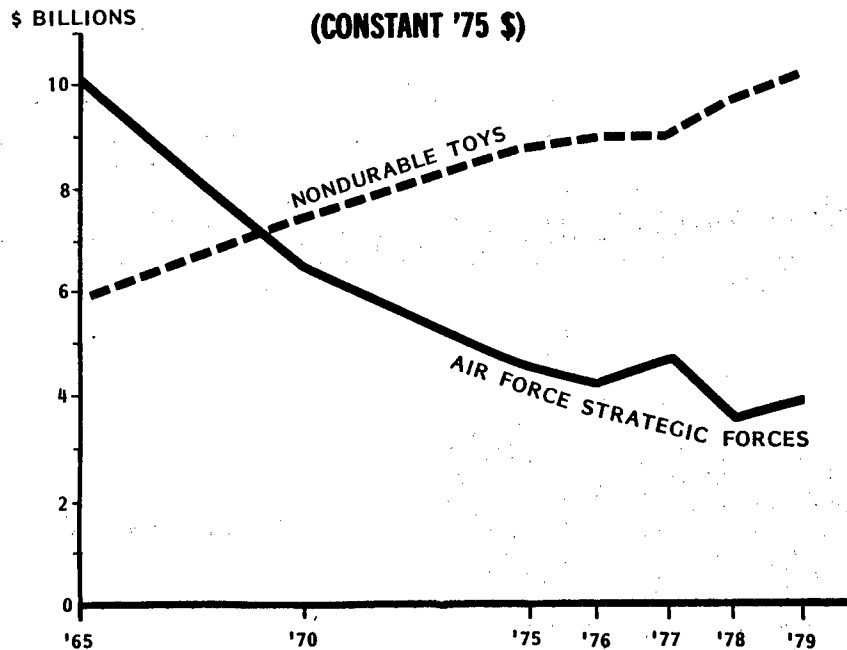
IN TERMS OF THE PERCENT OF GNP, FUNDS FOR DEFENSE HAVE DECLINED OVER TIME, WHILE THOSE DEVOTED TO NON-DEFENSE HAVE STEADILY INCREASED. DEFENSE HAS BEEN TAKING CUTS FOR OVER TEN YEARS WHILE OTHER GOVERNMENT SPENDING HAS CLIMBED DRAMATICALLY. SO, IT IS HARDLY ACCURATE FOR THE MILITARY TO TAKE THE BLAME FOR DEFICIT SPENDING AND ECONOMIC PROBLEMS. NOR IS IT REASONABLE TO EXPECT A STRONG DEFENSE WITHOUT PAYING FOR IT.



THIS CHART COMPARES TOTAL DEFENSE EXPENDITURES TO WHAT THE U.S. SPENDS ON RECREATION. TWENTY YEARS AGO WE SPENT ALMOST THREE TIMES AS MUCH ON DEFENSE AS ON RECREATION; TODAY, WE SPEND ABOUT THE SAME. I AM ALL FOR RECREATION, BUT LET'S NOT FORGET THAT OUR COUNTRY MUST PROTECT IT'S FREEDOM, OR OUR RECREATION WON'T CONTINUE.

IT'S ALSO INTERESTING TO NOTE THAT SINCE 1976, THE AMERICAN PUBLIC HAS SPENT MORE ON ALCOHOL THAN FOR ALL EXPENDITURES FOR THE AIR FORCE. I'M NOT ADVOCATING THAT WE SPEND LESS ON DRINK AND MORE ON THE AIR FORCE, I JUST WANT TO PUT MILITARY SPENDING IN PERSPECTIVE AND TO SHOW THAT WE CAN AFFORD IT.

**NONDURABLE TOYS AND SPORTS SUPPLIES
vs USAF STRATEGIC FORCES
(CONSTANT '75 \$)**

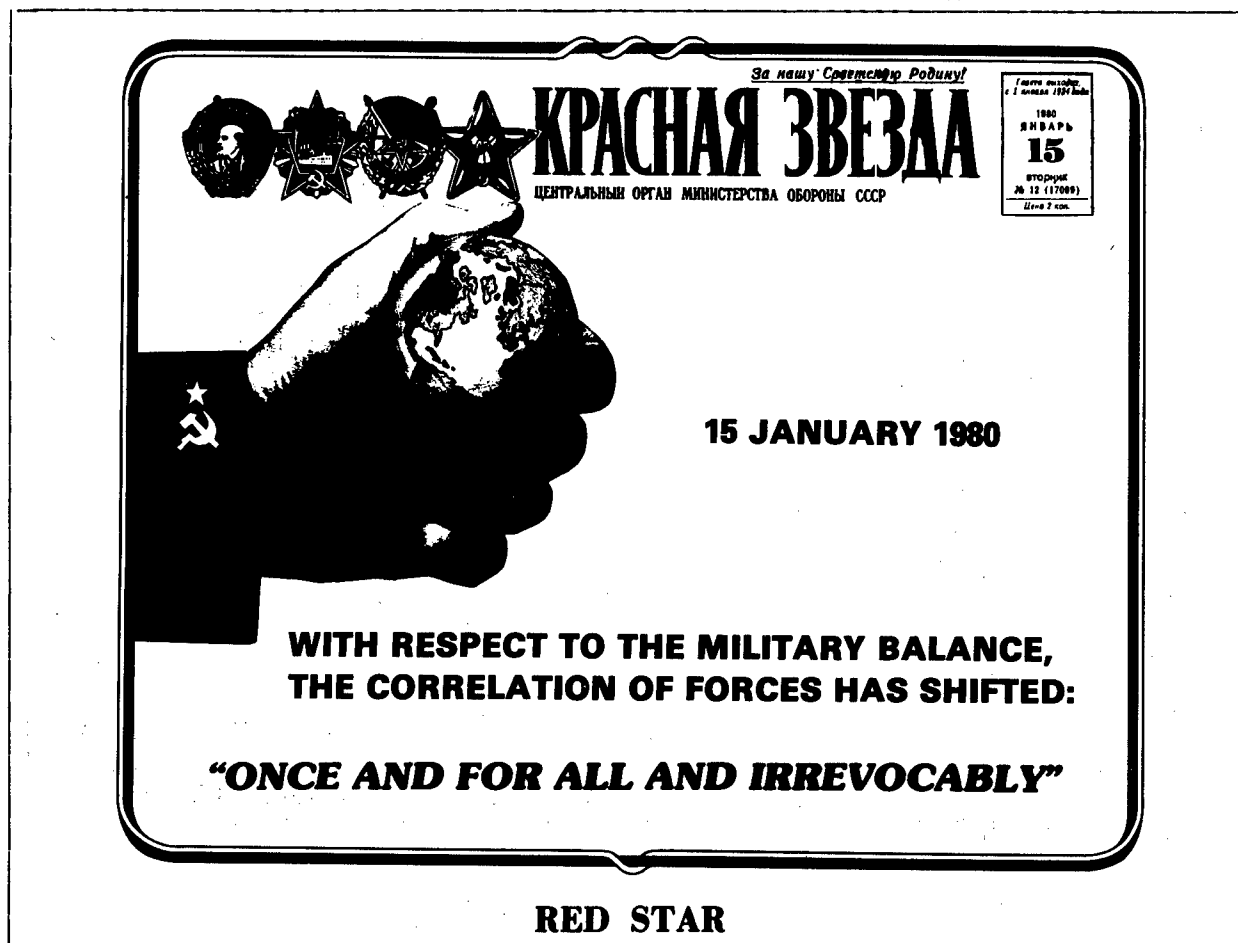


SOURCES: STATISTICAL ABSTRACTS 1980
USAF SUMMARY 1981

AS A FINAL COMPARISON, HERE IS A CHART WHICH SHOWS WHAT THE AIR FORCE HAS BEEN SPENDING ON STRATEGIC FORCES VERSUS U.S. EXPENDITURES FOR TOYS AND SPORTS SUPPLIES. IF THE TRENDS OF THOSE TWO LINES HAD BEEN REVERSED FOR THE LAST TEN YEARS, WE WOULDN'T BE SO WORRIED TODAY ABOUT THE STRATEGIC POWER OF THE U.S. RELATIVE TO THAT OF THE SOVIETS.

The Soviet's Viewpoint

MY QUESTION WAS, "CAN WE AFFORD TO RESPOND TO THE SOVIET THREAT?" WELL, I MAY NOT BE CERTAIN OF YOUR ANSWER, BUT I BET I KNOW HOW THE SOVIETS WOULD LIKE YOU TO ANSWER IT!



TWO YEARS AGO, IN THEIR MILITARY JOURNAL RED STAR, THE SOVIETS SAID THAT THE MILITARY BALANCE HAD SHIFTED IN THEIR FAVOR, "ONCE AND FOR ALL AND IRREVOCABLY." I SURELY WOULDN'T EXPECT ANY UNHAPPINESS IN THE KREMLIN IF WE NOW GRANTED THEM TECHNOLOGICAL AND STRATEGIC SUPERIORITY TO GO WITH THEIR NUMERICAL SUPERIORITY.

PERSONALLY, I BELIEVE THAT, IF YOU OPT FOR THE LOW-COST, SIMPLE APPROACH TO TACTICAL AIRPOWER, YOU WILL GET THE SAME RESULTS WE GOT AT THE THAHN HOA BRIDGE IN VIETNAM--INEFFECTIVE FORCES AND AN INABILITY TO DO THE JOB. AND, IF WE DON'T PROCEED WITH BOMBER MODERNIZATION WITH ALL DUE SPEED, WE COULD BE GRANTING THE SOVIETS STRATEGIC SUPERIORITY TO COMPLEMENT THEIR MASSIVE CONVENTIONAL FORCES. UNLESS WE ARE WILLING TO FACE THE CONSEQUENCES AND DANGERS THAT ENTAILS, THE ANSWER TO THE QUESTION, "CAN WE AFFORD TO RESPOND TO THE SOVIET THREAT?" MUST BE YES.

I DON'T BELIEVE WE CAN AFFORD ANY OTHER ANSWER!

END